

THE MEDICAL TIMES.

FRIDAY, SEPTEMBER 1, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON INTERMITTENT HÆMATURIA.

BY JAMES TYSON, M.D.,

Clinical Lecturer on Microscopy and Urinary Chemistry in the University of Pennsylvania; one of the physicians to St. Joseph's Hospital, etc.

THE patient I present to you to-day, gentlemen, illustrates a class of diseases of which it may be truthfully said the real nature is, as yet, unknown. The term "Intermittent Hæmaturia" is one which has been applied to at least three sets of symptoms, of which the most characteristic is the intermittent discharge of a blood-colored urine; the term *blood-colored*, rather than *bloody*, being here used designedly, for reasons which will subsequently appear.

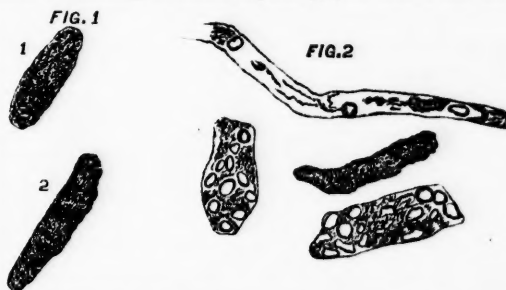
The set of cases, of which the present is a representative one, are not unvarying in their symptoms; but that before you is sufficiently typical, and I will, therefore, read the history as obtained.

E. P., aged 34, a bricklayer, has lived in the rear of 1110 Ohio Street, in a densely-built portion of the city, since 1859,—a period, therefore, of about twelve years. He never had anything like "chills" before his present illness, and, except having occasionally worked in the vicinity of the more open parts of the city, known as "the lots," where there is always more or less standing water, he has not been exposed to malarial influences. On the 8th of October, 1870, he was laying brick at Fourth and Willing's Alley, one of the oldest and most densely-peopled portions of the city, when, having occasion to pass his water, he noticed that it was "bloody." There was no preceding chill; but immediately after this act of micturition, he was seized with violent pain in the umbilical and lumbar regions. He was carried to his home, where the pain was relieved at the end of an hour by a hypodermic injection of a salt of morphia. His urine continued "bloody" for twenty-four hours, after which it became natural in appearance. He returned to his work in three days after the attack, but a few days later had a second, *preceded*, in this instance, by a *marked chill*, and followed as before by the pain, which is described as being very severe. He recovered, and again went to work, but again had a chill, bloodlike urine, and pain. He thus had five similar attacks between the 8th and 26th of October, but is unable, at present, to recall any periodicity in their occurrence. Succeeding the chill, and during the pain, he had, in each instance, a profuse "sweat;" but, except a slight feeling of warmth, with regard to which he is by no means certain, there is no history of a febrile movement. After the 26th of October, the chill, and bloodlike urine, presented themselves on an average once a week, to March 24. They were not followed as before by pain, until the recent attack about to be described. The sweats also ceased with the disappearance of the pain, to which, indeed, it seems not impossible to attribute them, since we know it is not unusual for paroxysms of pain to be attended by profuse sweating; no peculiar import, therefore, can be assigned them.

On Thursday, March 23, he presented himself with a bottle of urine, which was normal in color, without deposit, without albumen, and without any morphological element discoverable by careful microscopic examination. On the evening of the next day, he brought to me six ounces of urine just passed, and presenting the characters of the specimen before you,—of an opaque, dark-brown, almost black color when in bulk, and of a bright cherry-red in thin layer. On standing, it deposited a moderate amount of dark reddish-brown, apparently pulverulent sediment. The odor was only faintly urinous, reaction neutral, and sp. gr. 1020. There was in response to the usual tests a supernatant collection, rather than a deposit, of albumen, which occupied nearly one-

half of the bulk of the fluid tested. Most interesting, however, were the results of the microscopic examination. *Not a single blood-corpuscle* could be detected, after the most careful search. There was, however, a great abundance of amorphous granular pigment, which, in aggregation, presented a dark-red color, and which did not disappear on the application of heat; also numerous granular casts, filled to various degrees with the granular element alluded to, as seen in the specimen under the class microscope, as well as the drawing which I pass around. (*Fig. 1.*) There were, also, pigment-flakes of a dark-red color, small granular cells, and epithelium. There were few urates. This attack was preceded by a chill, with a recurrence of the subsequent violent pain, which had been long absent.

On March 27, A.M., the urine was again clear, but at 4 P.M. of this day he had a slight chill, followed by the bloodlike urine which I here show you, and presenting the same characters as that described. Let us now study it in your presence. Note the dark-brown, almost black color when in bulk, and the evident cherry-red when in thin layer. The odor is more distinctly urinous than that of the first specimen. Its reaction, you perceive, is barely acid; its specific gravity is 1021; and, on the application of heat and acid, albumen is evidently present in considerable bulk,—quite one-half that of the fluid tested. Placing a drop upon a slide and examining it microscopically, you notice the ele-



ments found in the former specimen,—granular casts, colored granules and flakes, and epithelium. But there is something more. By only superficial study of the field, those at all experienced notice that more than one of the casts in view contain, in addition to granular matter, blood-corpuscles,—constituting them, therefore, blood-casts,—while free corpuscles are also present, altered, it is true, but still capable of showing, by transitional focusing, the reversal of lights and shadows by which we can always distinguish these bodies. You will perhaps recognize the blood-casts and corpuscles by their resemblance to the little drawing which I pass among you, and which was made from a slide containing a specimen of this urine. (*Fig. 2.*) Some of the casts in this specimen contain so little granular matter—are, indeed, so nearly empty—that they may be called *hyaline*. Many are fragmentary, but others are of considerable length, and they are generally of medium diameter, averaging perhaps the one-thousandth of an inch.

In another respect also do the microscopic appearances differ from those of the specimen examined at an earlier date. The dark-red color which was described as characteristic of the free granular matter when aggregated, as well as of the casts, is not here present, owing to the fact that the hæmato-globulin to which it was due has been dissolved out by the water, in which it is slowly soluble. The same agent has altered the shape of the corpuscles so as to make them more difficult of detection.

The comparative study of these two specimens of urine from the same patient is interesting chiefly from

this fact, that in one blood-corpuscles are absent, and in the other abundantly present. It also proves that in this instance, at least, the discharge is one of true blood, if the large quantity of albumen present, in connection with the red color, will not be admitted to prove the same fact. The presence of corpuscles is also interesting from the fact that, in the large majority of cases reported, blood-corpuscles are wanting. So general is this, that Dr. Beale, in *The Practitioner* for August, 1868, does not hesitate to declare that "the urine in these cases does not contain blood." He says, moreover, that in not one of five or six cases which have been under his care could he detect blood-corpuscles by the most careful microscopical examination, and that the quantity of albumen was much less than would have existed had the deposit been one of blood-corpuscles; finally, that it is improbable that in these cases there is any hemorrhage as in acute inflammation of the kidney, "and they ought not to be spoken of as cases of hæmaturia." With regard to the casts, he says "they seem to consist of mere mucus, and contain no cells of renal epithelium, blood-corpuscles, or other bodies derived from the uriniferous tubes. The dark granular matter frequently seen completely disappears on exposure to a gentle heat, proving that it is due to the presence of urates rich in coloring-matter, which have been deposited upon and in the substance of the casts."

So, also, in most of the cases reported by Dr. Harley and Dr. Dickinson in *The Medico-Chirurgical Transactions of London*, vol. xlviii., 1865, the urine did not contain corpuscles; and in the case of Dr. Harley which contained them, not more than one or two could be detected in the field under examination. Accordingly, Dr. Harley, in the paper cited, makes "the almost total absence of blood-corpuscles, notwithstanding the hemorrhagic appearance of the urine," characteristic. And it will be recalled that the first specimen of urine here examined, taken alone, quite justifies this conclusion. According to Dr. Harley, also, the albumen in these cases differed very materially from the albumen of blood-serum, in its ready solubility in an excess of acid. In our own case such solution did not occur. Neither in this case did the granular matter disappear on the application of gentle heat. In all other respects, however, of clinical history, physical phenomena, and, as will appear, results of treatment, the present case corresponds sufficiently with the set of cases included under those of "intermittent hæmaturia." To complete the analogy, the same colicky pain described as occurring in this case was also noted in the cases of Dickinson, and lumbar pain, in some instances extending down the thigh and into the testicles, with retraction of these organs, was common in the cases of both Harley and Dickinson. Harley also noted an increase in the quantity of urea, but, unfortunately, no volumetric analysis was made in our own case. I have had no hesitation, therefore, in including this case in the same category.

Whatever may have been the exact source of the bloodlike fluid in the cases reported by the eminent English authorities above alluded to, the different means of physical study employed in this case undoubtedly point to a hæmal origin, and the urine might be strictly called bloody. That the results of the examination of the first and second specimens of urine, taken in connection with the observations of Harley and Beale, throw some additional light upon the subject, I am inclined to believe, and hope to be able to show by a more detailed consideration of the significant features of this and other cases. Admitting, however, as we do, on the evidence of these eminent gentlemen, the existence of cases in which the corpuscular blood-element is wanting, I have purposely used the term "bloodlike" fluid in defining the disease.

What, then, are the significant features of these cases, and what is to be learned from them? First, as to the frequent absence of blood-disks in the urine, while a granular debris, apparently resulting from their disintegration, is abundantly present. While the hæmal nature of the fluid must be admitted, does it not clearly point to a disorganized state of the blood, whatever the cause of the disease or the seat at which disorganization takes place? The indestructible nature of the granular particles implies an organic origin, which is best accounted for on the supposition that they are the debris of blood-disks. The history of the formation of the derivatives (hæmatin, hæmin, hæmatoidine) of hæmato-globulin from its solution, furnishes no parallel to the prompt and sudden appearance of these insoluble granular elements.

The second significant feature is the *chill*, or a sense of coldness. This is marked in nearly every case. Dr. Harley asked one of his patients suffering with this disease what was the matter with him, and received the following reply: "I can't tell you; but each time I get cold hands or cold feet I pass bloody urine, while my urine at other times is perfectly healthy." This is true of our patient. He complains of coldness in his fingers and toes during the time his urine contains blood. In another case of Dr. Harley's the thermometer in the axilla indicated 96.1° F. On the authority of the same writer, intermittent hæmaturia is a disease of cold climates or of cold seasons of the year. The present case began in October, and continued with little abatement until April 1; and the patient is certain that exposure to dampness or rain is an exciting cause of his attacks.

A third element of this case requiring further allusion is the fact that there is no clearly-defined malarial history. In certain cases reported by Harley there was clearly such a history; in others, however, there was none. But there are scarcely any circumstances under which, at least in this country, malaria can be excluded, since cases of undoubted malarial disease are constantly springing up in the densely-populated portions of this city, where no malarial influence could have been before suspected. Though not clearly traceable, therefore, in this instance, it cannot be set aside, especially as there are some elements of the man's condition which point to it. Thus, he is sallow, and his conjunctiva slightly icterode. He states also, though somewhat hesitatingly, that he becomes much more yellow during the attacks.

On the other hand, we can attach no significance to the fever and sweats. Moreover, cases are reported by Drs. Harley and Dickinson in which mere exposure to cold, or the prevalence of cold east winds, was the exciting cause of an attack; and, in the present instance, getting wet seems also to have induced attacks. Again, it is well known to persons having suffered with malarial disease, that a cold damp day, or an east wind, constantly induces the chilly feeling, and especially the pains above described as occasionally present.

It will be apparent to you, therefore, that from these facts it is difficult to draw a definite conclusion as to the *nature* of this affection. Before, however, even attempting to draw any conclusion, let us determine how far the kidney is involved in the affection. Since we have undoubtedly either blood or disorganized blood present, and no evidence of renal derangement beyond what can be accounted for by the presence of such blood, we conclude that it is a blood- rather than a kidney-disease, and that the kidneys are merely engaged in eliminating the results of such blood-affection. It is now commonly accepted that the liver and spleen—the latter especially—possess the function of working up the effete blood-disks. When these organs, from any cause, cease to continue this function, some other must take on the substitutive action; and one of the organs

which is constantly replacing the office of the liver at least, is the kidney. It is not unreasonable, therefore, to admit the existence of such supplemental action in the present instance, and to conclude, in consequence, that either as the result of disorganization of blood-disks more rapid than the liver and spleen can accommodate, or, on the other hand, as the result of a deficient action of either of these organs, the kidneys are compelled to assume a supplemental one. In some instances physical exploration has revealed an enlarged liver and spleen, but in no instance have I been able to discover further evidence than is afforded by this and the occasional presence of jaundice, though Beale states that there is usually abundant evidence, that the function of these organs is interfered with. Admitting, however, the possibility of such interference, it seems more reasonable to account for the phenomena present on the ground of a rapid disorganization of blood-corpuscles and the elimination of their debris by the kidney, without attempting to give the exact seat of such disorganization.

But, having concluded that this affection is one of disorganization of blood-disks, what is its *cause*? Of this we are perhaps less ignorant. Some cases are undoubtedly due to malaria; others cannot rationally be so accounted for; and, in a few instances, direct exposure to cold seems to be at least the exciting cause. But when we recall what has been said with regard to the effect of cold winds and dampness upon those who have been subjected to malarial poisoning, we may justly say that perhaps from none of the cases of true intermittent hæmaturia can malarial influences be excluded.

This condition must not be confounded with either of two others attended with intermittent discharge of bloody urine. The first is that form which is often met with in our Southern States, and is variously known as hemorrhagic paludal fever (Faget), hemorrhagic malarial fever (Michel), bilious hæmaturic fever, black jaundice (Ghent), cachemia hemorrhagica (Owens), icterode pernicious fever (McDaniel), intermittent icteroid fever (Sharp), pernicious icteric fever (Daullé), malignant congestive fever (Osborn), purpuræmia (Riggs), yellow remittent (Sholl), yellow disease, and canebroke yellow fever. This is a disease of *evident* malarial origin, preceded by ordinary paroxysms of intermittent fever, and characterized by violent chill, followed by febrile movement and profuse perspiration, nausea, vomiting, and often purging of black, tarry-looking matter, by rapid jaundice, often impacted gall-bladder, and not only hemorrhage from the kidneys, but also from all mucous and excoriated surfaces, as that produced by a blister. It has been stated that it is common in the southern part of the United States; but it is by no means confined to these limits, but occurs wherever malarial poisoning occurs in its intensest degree, as in the Danubian provinces, in Madagascar, Cayenne, and the West Indies. You will find admirable papers on this subject, by R. F. Michel, in the *New Orleans Journal of Medicine* for July, 1869, and by J. C. Faget, in the same journal for October, 1869, in which will be found references to the literature of the subject scattered throughout the Southern journals since 1859. In this disease there is also sudden, great, and lasting prostration, while in the form of intermittent hæmaturia under consideration there is a marked freedom from great debility, and often the patient appears otherwise quite healthy. Again, hemorrhagic malarial fever is said by those who are familiar with it to be even more fatal than that form of malarial fever known as congestive fever, of which it is indeed perhaps a serious form. The disease under consideration is never fatal, and generally is quite amenable to appropriate treatment.

Intermittent hæmaturia may be temporarily mistaken for another affection attended with intermittent discharge

of bloody urine, which has also been studied by Dr. Harley, and called by him *endemic hæmaturia*. This disease, as far as studied, has been found to originate at the Cape of Good Hope and Natal, and affects adult European colonists and coolies imported. The natives and Malays, or negroes formerly imported as slaves, are apparently exempt. This form of hæmaturia has been clearly traced by Dr. Harley to the presence in the kidney of a parasite, a species of *Bilharzia*, the ova of which are found in great numbers in the urine. Once familiar with the existence of this disease and the few facts I have stated with regard to it, there is scarcely a possibility of its being mistaken for the form of intermittent hæmaturia now under discussion.

Treatment.—Finally, there is undoubtedly further evidence of the cause of this affection in the results of treatment. It has been shown by the observers so often quoted that the method of treatment of malarial affections so familiar to the older practitioners of this country—the occasional administration of a purgative dose of a mercurial previous to and during the use of the salts of quinia—has been most effectual in these cases, where the more usual plans of treatment, such as cupping over the loins, have signally failed; and although this patient has been somewhat irregularly on the use of quinine during the winter, we will now pursue this plan systematically. Accordingly, it is ordered that he take at once (March 23) gr. x of calomel, followed by a dose of oil in the morning, and, after his bowels are moved, gr. xviii of the sulphate of quinia daily, in six-grain doses.

Concluding Note.—Thursday, May 4, the patient again presented himself, and stated that he had had no chill for five weeks after the day of his last visit, having continued, except for two or three days towards its close, to take the prescribed quantity of quinine: on these few days he had either omitted the treatment entirely, or taken a smaller quantity. On Thursday, April 27, however, a cool and rainy day, he got slightly wet after dinner; and at 3½ P.M. he had a violent chill, followed by a discharge of the same bloody water, but his urine was again clear by bedtime. On that day he took gr. vi of quinine; during the week between the occurrence of this chill (April 27) and the 4th of May he was irregular in taking his medicine. On May 4 the quinine was reduced to nine grains a day, and up to the present time, June 21, a period of thirteen weeks, no paroxysm of bloody urine has occurred, and he is working daily at his trade. He has not taken the anti-periodic for several weeks.

From these facts in the clinical history, physical condition of the urine, and results of treatment, there seems reason to believe that this condition, which of all the sets of symptoms attended with the discharge of blood-like urine is best called "intermittent hæmaturia," is a blood-affection, attended with a rapid disintegration of the corpuscular elements, and the elimination of the debris of these by the kidneys; that its cause is most probably one of malarial nature, though it must be admitted that some cases can be but partially accounted for on this supposition.

TREATMENT OF OTORRHOEA BY SPIRIT OF WINE.—Dr. F. E. Weber (*Berlin Klin. Woch.*, January 9, from *Med. Times and Gaz.*, February, 1871, p. 239) states that spirit of wine is the best topical application in cases of otorrhea uncomplicated with caries or polypous growth. The ear must first be well syringed out; then, the patient lying down, as much of the pure spirit as the ear will contain is poured in and allowed to remain five minutes. After the spirit flows out, the meatus must be dried and plugged so as to prevent the access of air. At first it is to be applied three times a day, then twice, and is to be continued for some time after the otorrhea has ceased.

ORIGINAL COMMUNICATIONS.

A HISTORY OF AN EPIDEMIC OF PURULENT OPHTHALMIA

OCcurring IN THE PHILADELPHIA HOSPITAL DURING JANUARY, FEBRUARY, AND MARCH, 1871.

Read before the Philadelphia Hospital Medical Society, April 15, 1871.

BY T. D. DAVIS, M.D.,

Resident Physician.

ON the 13th of December, 1870, a child named Annie Evans, aged nearly 7 years, was admitted into the nursery of the Children's Asylum, apparently in good health. A few days after, the nurse discovered that she had a profuse vaginal discharge, which she described as "nasty greenish-yellow stuff." For this nothing was done but to keep the parts clean. About ten days after admission, a thick yellow discharge was noticed running from both eyes, and in five days from this, December 28, she was transferred to the infirmary. In the quarterly report for the term ending December 31, hers is the only case of purulent ophthalmia recorded.

On taking charge of the wards in connection with my colleague, Dr. Spencer, on January 6, we found fifteen cases of sore eyes, of a character so decidedly purulent that we concluded to isolate them immediately.

Of these fifteen cases, five were from the nursery where Annie Evans had first been, one of them having been her bedfellow; the remainder occurred in the infirmary after her introduction there. After the separation of the children, which was as complete as possible,—those affected being kept from eating with, sleeping with, or even seeing the others,—there was an immediate decrease in the number of new cases; and after a few days there was not a single new case, except it was in a person who had charge of the affected children, or was in some way thrown with them. The total number of cases treated was forty-five, and at the close of our term of service, on the 1st of March, there were but three persons in the eye-ward who had not been troubled with some other disease of the eye before the epidemic. Of these three, one was Annie Evans who was first affected. Eight corneal ulcers occurred and three corneae sloughed, two of the latter being in an idiot boy whose eyes were already very much diseased, and the other in a little girl whose lids could not be forced open for over a week. All of the ulcers healed up completely, without permanently injuring the eyes. From notes carefully kept on many of these cases, and from experiments tried, I have made the following observations and deductions:

In this frightful and disgusting disease the symptoms manifest themselves very suddenly. The patient may go to bed feeling perfectly well, and on arising find his eye swollen to the extent of complete closure, and discharging large quantities of thick straw-colored pus. In two cases, examined carefully at 9 A.M., no sign of disease could be seen, and at 3 P.M. of the same day the eyes were discharging the characteristic pus quite freely. The period of incubation is somewhat uncertain; one case occurred within twelve hours after the time she was subjected to the contagion. Another child, having been discharged too soon, returned in two days along with several new cases.

The adults who were affected, first noticed a watering of the eye, and a sensation as if dust had been blown in it, some feeling confident that a grain of sand was actually in the eye. There was also slight photophobia. During this period the inside of the lids was congested and of a bright-red color, without much injection of the arteries of the conjunctiva. Within six hours from this

stage, if nothing is done to arrest the disease, the lids become fearfully swollen, the conjunctiva greatly chemosed, a thick yellow pus commences to issue from the eyelids, and the photophobia becomes intense, with severe pain. The parts may become still more profoundly altered. The chemosis may so extend as to overhang the cornea, making it appear no larger than the natural pupil, while the white of the eye entirely disappears. The lids swell still more, becoming dark-red or purplish on the outside, and may be so puffed out that it is impossible to evert them or open them in any way so far as to see the cornea. In this stage the cornea may become clouded, and in a short time slough away, letting the humors of the eye escape; or small ulcers may appear, from the size of a pin's head to that of a split pea. If the eye escapes this extreme degree of inflammation, the lids become completely covered with small pearl-colored granules. The retrotarsal fold of the conjunctiva is everted, presenting a deeply-serrated appearance. The pus still pours out from between the lids, which have no tendency whatever to recover, but rather to persistent chronic granulation.

The cause of this epidemic we believe to be solely contagion from the pus originally furnished by the child Annie Evans. There was, throughout, no case that could not be traced directly to another previously diseased. Nor were any of the attendants having charge of the children attacked until accident caused them to receive some of the discharge directly in the eye. The immediate cessation of the epidemic on the separation of the affected children from the others, and its speedy recurrence on one of them being discharged too soon, prove emphatically its dependence on contagion. On inquiry into the history of Annie Evans, we found that for some time before her admission here she had been living at St. Vincent's Home in this city. Both the physician in charge and the lady superior declared that there had been no purulent ophthalmia in that house for over three years. The similarity of the child's leucorrhœal discharge and that from the affected eyes led us to suspect that there was some relation between them. We also noticed that when nothing was done for the leucorrhœa the eyes remained in statu quo, do what we would; but on relieving the leucorrhœa, the eyes improved, and on again interrupting treatment of the leucorrhœa, in order to obtain some of the discharge for experiment, the eyes soon became worse.

We took some of this vaginal discharge and put it in the right eyes of two kittens. The pus had become a little dry, and was moistened with water before its introduction. Nothing was noticed in the next twenty-four hours, except that the inoculated eyes were a little more watery than the others. The kittens were not seen for several days, when I was not surprised to find them having well-marked purulent ophthalmia, and four more kittens of the same litter had been inoculated by the other two. From this experiment and the other facts, are we too hasty in attributing the origin of this epidemic to the primary leucorrhœal discharge of this child?

The prognosis depends much upon the time the eye comes under treatment. If seen within the first few hours of its inception, the disease can be speedily checked; but if allowed to run on too long, there is great danger of total blindness from ulceration or sloughing of the cornea, or, if this be escaped, a long attack of granular lids.

The treatment is as varied as the authors are numerous who have written on it. But we have placed above all others the judicious use of nitrate of silver. A fearless and skilful use of this in the first stages will check the disease immediately, if seen within the first twelve hours or before the lids are much swollen. The lids should be turned out, and thoroughly touched in

every part with a solution of nitrate of silver (gr. xxx- $\frac{1}{2}$ to $\frac{1}{2}$ of water), which will check the disease without injury to the eye, while a weaker solution so employed seems to add fuel to the flame. If the lids are greatly swollen and the conjunctiva chemosed, a still stronger solution may be employed,—the severity of the symptoms abating as if by magic.

Leeching, in the cases in which it was tried, seemed to have had no good effect; in fact, the patients thus treated suffered for a longer period than the others. Cold applications had the happiest result in relieving pain, but did not seem to affect the inflammation. Solution of sulphate of copper and the solid salt were used, but were abandoned for the nitrate of silver.

Various injections and washes were tried, but I believe cold water was as good as any of them. The bowels were kept regular, and strict cleanliness was enforced, each patient having a separate basin, towel, rags, etc., and the eye syringed every hour with some such solution as

Hydrargyri Chloridi Corrosivi, gr. j,
Pulveris Opii, gr. xvj,
Liquoris Calcis,
Aquæ destillatæ, aa, $\frac{1}{2}$ iv,

or some astringent solution, as of alum or sulphate of zinc, or simple cold water. If the disease was not conquered at once, daily applications of nitrate of silver were made with a brush. If granulations sprang up, weak solutions of the same substance were continued, the strength being graduated by the degree of pain caused, which was never allowed to exceed slight smarting. This solution was used in preference to any other treatment, because we found that it caused the granulations to disappear very rapidly and without pain. The treatment of the corneal ulcers consisted in simply securing the eye from pressure or roughness; and it was eminently successful, as every one recovered without injury to the eye, and two healed without a mark to show there had ever been disease there.

As to any other treatment, I believe good food and pure air to be of paramount importance, and internal medication needless. We could not see the least advantage in the use of cod-liver oil, the patients improving rather faster after discontinuing it. Several cases were salivated by dusting calomel in their eyes, and one or two gums were touched by its use internally, but we could not see that it was in any way beneficial; it appeared rather harmful. After experiments with the most plausible plans of treatment suggested, we have placed at the head of our list cleanliness, pure air, and nitrate of silver.

ON INFLAMMATION OF THE LONG SAPHE- NOUS VEIN.

BY HARRISON ALLEN, M.D.,

One of the Surgeons to the Philadelphia Hospital.

THERE have been presented at the clinic of the Philadelphia Hospital within the past six months several cases of inflammation of the internal saphenous vein, some account of which will form the basis of the following notes and comments:

Case I.—Wm. B., aged 71, with defective sight, fell through a cellar-door, on the 23d of October, 1870, to the floor beneath, incurring a severe contusion over the upper third of the right leg, anteriorly. He was able to walk after the accident, and thought no more of the affair until about two weeks afterwards, when the leg became painful, and an attack of erysipelous inflammation supervened below the point of contusion. On the fifth day of this attack he was admitted into the hospital. The note taken at this time describes B. as a nearly blind, decrepit, emaciated man, the subject of tertiary syphilis, as evidenced by depressed cicatrices on the vertex (follow-

ing necrosis of the outer plate of the skull), osteocopic pains, cicatrices in the groin, and the presence of a node on the right shin. A diffused purplish-red flush was seen over the right leg at its upper half anteriorly, in the centre of which was the crust of an old abrasion. A large patch of ecchymosis extended from the inflamed area to the ankle, due, it was thought, to the patient having worn an ill-fitting, roughly-mended boot. The region of the calf was occupied by large watery blebs. The entire leg was cedematous and painful; the foot, however, was not involved. The thigh was of a tallow-color, and marked with irregular red stripes along the course of the branches of the superficial veins. The position of the internal saphenous vein at and above the internal condyle was indicated by a thickened red stripe. Along the course of the latter vein, at the middle of the thigh, a distinct patch of phlebotic induration, covered with minute vesicles, was noticed. A single engorged lymphatic gland was detected in the groin.

The arteries at both wrists were atheromatous. Pulsations, 90 per minute. Patient depressed, irritable. General treatment supportive. Local treatment consisted of lotions of lead-water and laudanum.

On the nineteenth day of the disease an attack of pneumonia of lower lobe, right side, was threatened. Excepting this, not to mention the recurrence of his old enemy,—osteocopia,—our patient did well; the symptoms gradually subsided, to permit convalescence to date from about the eighteenth day.

Case II.—N. W., aged 32, of slight form, nervous temperament, was admitted February 24, 1871, with an acute diffuse cellulitis about the right knee-joint. The following history was elicited: W. had served in the late war, and received during the first attack on Fort Fisher a wound in the right leg, which resulted in partial ankylosis of the corresponding knee-joint. Upon being discharged on surgeon's certificate of disability, he adopted peddling as a source of maintenance. On the evening of February 4th he injured the maimed limb at the knee, while getting off a passenger railway-car. Inflammation leading to suppuration followed, pus discharging spontaneously. Upon admission the parts from the middle third of the leg to the lower third of the thigh were reddened and swollen. Two openings of sinuses, doubtless leading towards the head of the tibia, were seen in the popliteal space. Another lay immediately to the inner side of the shaft of the tibia, near its anterior border. The skin along the course of the internal saphenous vein at and above the knee-joint was brawny and intensely inflamed. Firm pressure along its tract developed a darkish-blue line, and the hand, when drawn slowly and firmly downwards along the course of the vein, caused pus to flow freely from the opening on the leg. There was slight effusion into the joint.

During the treatment, the outline of which was similar to that employed in Case I., the parts were drained in this manner, since it was observed that by far the greatest amount of pus would flow when pressure was exerted directly along the course of the vein. The openings in the ham discharged but little. There appeared to be no reasonable doubt that we here had to contend with a suppurative phlebitis along the tract of the internal saphenous vein, with disorganization of the knee-joint and probable threatened caries of the head of the tibia. The patient from the first refused to consent to any exploration of the parts, and he subsequently demanded his discharge, unrelieved of the condition for which he was admitted.

Case III.—Margaret B., æt. 42, had been an inmate of the house since May 7, 1869. Originally admitted for "ulcers of feet," she has remained ever since in the surgical wards of the house, excepting the interval between July 7 and September 1, 1870, during which time she was treated for relapsing fever in the medical wards.

This patient is subject to attacks of simple erysipelas of both lower extremities. The feet are deformed by scars, the result of reputed indolent ulcerations. As a rule, these attacks have had a duration of but a few days. Rest in the recumbent position, and the use of local anodynes, always speedily effected a cure. On the evening of the 6th of March an attack of the old complaint was announced by a chill, followed by high fever, the temperature at one time rising to 106°; pulsations per minute, 130. These symptoms persisted until the seventh day, when they gradually subsided. The significant cause of this marked systemic disturbance was found in the deep

flush of erysipelas, which soon involved the entire length of both feet and legs, extending thence upwards and beyond the knees. The lower third of the right thigh presented all the symptoms of phlebitis of the internal saphenous vein. The induration and pain attendant upon this inflammation remained for several weeks after the subsidence of the erysipelatous flush.

During the summer of 1869 the writer enjoyed an opportunity, through the courtesy of Dr. Addinell Hewson, to observe the condition of the parts concerned in inflammation of the internal saphenous vein at the lower third of the thigh. A negress died of pyæmia following amputation of the leg at the upper third, performed for extensive indolent ulcerations and cicatrices. The subject was very fat. The following is the substance of the note of the dissection:

The flaps were united throughout their entire extent, excepting at the angles. The lower flap projected a little beyond the line of the upper at the inner aspect of the stump. A vertical section through the skin in the median line demonstrated complete union of the flaps to the extent of one-third of an inch. The space beyond this line and the end of the bones was lined with pus-stained granulations. Extending from the inner side of the stump along the tibia up to a point opposite the patella was an irregular, broad, shallow cavity, defined by granulations, in the abundant subcutaneous fat. The internal saphenous vein was partially involved in this tract, and at the point of contact with it was contracted in calibre. Its coats were thickened, and a small clot occupied the vein at about the knee-joint, — a second near its termination, in the femoral vein.

Remarks.—A slight amount of inflammation, with thickening, is apt to occur in the connective tissue about an inflamed vein. In subcutaneous phlebitis the brawny red line in the skin is indicative of this,—the cord-like induration of the vein being alone expressive of the phlebitis proper. At certain points the periphlebitis may become circumscribed and pass on to suppuration, as in Case I., but more commonly it retains its diffuse character, and may extend up along the tract of the vessel beyond the limitation of the involved vein itself.

This latter tendency the writer has noticed in a stump of the right foot examined after death,—the patient dying of pyæmia following amputation through the tarsus. The tissues at the inner side of the ankle were a little infiltrated with serum, but the veins lying with the internal plantar artery and between the abductor of the great toe and short flexor were conspicuously swollen and inflamed. The tract of the posterior tibial vessels and nerve extending thence up the leg was infiltrated with serum and its parts matted together.

When the veins are deeply situated, as in the inter-muscular spaces, they are more liable to serve as conductors of inflammation than are the superficial ones, which, being held more firmly in position to the deep fascia of the limb, are, therefore, obedient to the general rule,—viz., that the nearer parts lie to the surface, the more compact is their connective tissue. The comparative rarity of subcutaneous phlebitis, when the vast numbers of lesions capable of producing it is considered, is remarkable, and affords an instructive contrast to the frequency of this complication after amputations and resections of bone. The general statement that phlebitis is more common with the superficial than the deep-seated veins is only correct so far as the absolute number of cases observed is concerned. When compared with their relative liability to become inflamed (the same conditions being presented to both), the latter are by far more apt to be selected, either primarily, through their own coats, or, secondarily, by periphlebitis in the soft connective tissue along their tract.*

* Rarely an enlarged lymphatic gland may, by infiltration of the bed of connective tissue in which it lies, press upon a neighboring vein at a point far removed from the original suppurating surface, and aid in the development of periphlebitis. This the writer has seen in several instances in

The burrowing of pus in the case of the negress and in Case II., as well as the location of the inflammation of the vein in all the above cases, may admit of the following explanation: The internal saphenous vein at the lower third of the thigh lies along the posterior border of the inner aspect of the limb, where it is surrounded by loose fat, and is not covered in by those delicate layers of aponeurotic connective tissue which it attains higher up. This is an exceptional relation for a superficial vein, and may foster the conditions predisposing to periphlebitis. Opposite the knee-joint, the vein is surrounded with less fat, but is here quite superficial, and affords again an exception to the general course of prominent veins, in lying upon the lateral aspect of a great joint, instead of in its line of flexion. In consequence of this, the vein is less protected and liable to many abrupt changes in its relations. After amputation at the upper third of the leg, the contraction of the soft parts still further modifies these changes, in addition to which the novel action of the quadriceps extensor muscle, now (according to Beclard) tending to flex the stump by a slight shifting of its tendon towards the inner condyle, may still further predispose the parts about the site of the vein to inflammation.

The practical application of the above facts would appear to be—

(1) In cases of suspected subcutaneous phlebitis of the lower extremity, the inner aspect of the lower third of the thigh should be carefully examined. (2) If burrowing of pus be threatened after amputation at or below the knee, a compress may with propriety be applied over the position of the long saphenous vein at the points defined. (3) In case the burrowing along the inner side of the thigh has actually occurred, the parts may be drained by pressure firmly and gently exerted downward over the position of the vein.

EXTENSIVE INVAGINATION

OF THE ILEUM, CECUM, AND ASCENDING AND TRANSVERSE COLON IN AN INFANT SIX MONTHS OLD. DEATH ON THE FIFTH DAY.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine in the University of Pennsylvania; Attending Physician to the Philadelphia Hospital, and to the Children's Hospital.

FRANCIS N. was born on October 1, 1870. He was well developed at birth, and continued perfectly healthy, with the exception of an attack of chicken-pox and of a mild form of eczema, until March 11, 1871. He had been successfully vaccinated on March 9. He was nursed by his mother, and, after the first of the year, he took, in addition to the breast, a teaspoonful of *Nestlé's Lacteous Farina* in a gill or more of cow's milk twice daily. This preparation seemed to agree perfectly with him, and he thrived vigorously. During March 11, he had three healthy passages, but after nursing that evening he manifested great pain, followed by vomiting. He appeared relieved by a few drops of elixir of valerianate of ammonia, but continued restless during the night, being somewhat soothed by warm applications to feet and epigastrium. The next day he was nursed only, and at three o'clock in the afternoon he had a large evacuation, of a mud color, very offensive, and mixed with some blood. The stomach was still very irritable.

At 3 A.M. on March 13 another evacuation of the same character, but less in amount, took place, and an enema of tr. opii, gr. iij, in starch-water, was given and retained. There were now distinct febrile symptoms, and the child

the superficial variety. In the case of a man dying of exhaustion from diffuse cellulitis of the right upper extremity, the epitrochlear ganglion was engorged and adherent to the basilic vein. The vessel was filled with a fibrinous clot,—white below, softer and blacker above,—which terminated at a valve placed about the lower third of the belly of the biceps, and directly above the position of the gland.

refused all nourishment. Throughout the day small doses of *sp. ætheris nitrosi* were given, and small quantities of lime-water, with a few drops of brandy, which allayed the nausea. Towards evening minute doses of calomel (grain one-thirtieth) were given.

The following day, March 14, he was very restless and sleepless, with fever, complete anorexia, and with nausea if food was taken; he also had several stools containing some blood.

He was first seen by Dr. Ellwood Wilson in the afternoon of this day, when he was ordered bromide of potassium, gr. ij, with *elix. ammoniæ valerianat.*, gtt. v, repeated every two hours, so as to secure sleep: a dose of castor-oil was also given to him. The laudanum enema was given him again that evening after a profuse discharge, and a few hours afterwards was repeated upon his having another discharge of nearly pure blood, amounting to more than a fluidounce.

On March 15, Dr. J. Forsyth Meigs saw the case in consultation with Dr. Wilson. A large lump had made its appearance in the left iliac region. The irritability of the stomach continued, and there were still frequent bloody stools, which now looked like bloody water containing shreds from the washings of scraped meat. Later in the day, several quite large masses (about the size of shellbarks) of hard insoluble matter were removed from the rectum. These masses bore the marks on their surface of the mucous membrane, with traces of clotted blood. Their removal gave the child some relief. The masses removed from the rectum consisted largely of organic matter (starch-granules, gummy matters, a few blood-corpuscles on the exterior), with some soda and potash salts. Upon the introduction of the finger a circular rim of bowel could be distinctly felt in the rectum. During the day the child took three teaspoonfuls of milk, and one of lime-water, with twenty drops of brandy every half-hour.

In the evening, the tumor in the left iliac region appeared even larger, and the invaginated bowel could be distinctly felt by the finger introduced into the rectum. The distress and exhaustion of the child were very great. Vomiting was not so frequent, and consisted merely of the ingesta, no stercoraceous matter having been rejected. Warm water was thrown copiously into the bowel, but escaped immediately from the anus, without affording any relief.

The milk and brandy were continued and retained. Near midnight, however, the child became much excited, and small doses of *elixir of valerianate of ammonia* were given in the place of the stimulus, with a soothing effect.

Death occurred the following day, March 16, at 9 A.M. The development of the vaccine pock continued for a few days after the beginning of the attack; it then aborted, and dried up into a thin, brown crust.

An autopsy was performed thirty hours after death. The body was well nourished. The left arm bore the dried scar of the vaccine pock, which had aborted. The abdominal cavity alone was examined. On section, the right part of its cavity was seen occupied by folds of small intestine, which were of normal appearance, but much distended with gas. There was no trace of the cæcum or ascending colon on the right side, but on the left side, in the place of the sigmoid flexure of the colon, was seen an elongated oval mass, which extended from the left iliac region towards the left hypochondrium, disappearing under some coils of small intestine. On tracing down the ileum, it was found to terminate by apparently plunging directly into the descending colon, at the upper end of the mass above described. The mesentery was tightly wound around the ileum at the point of entrance. It was thus evident that the lower part of the ileum had passed through the ileo-cæcal valve, and that the cæcum and ascending and transverse colon had successively been invaginated, until the whole mass was forced down the descending colon and rectum to within three inches of the anus. The descending colon, which formed the sheath, was opened and found but little congested, and not at all thickened up to near the point of invagination, where its walls were thickened and discolored. The mucous surface of the invaginated bowel was intensely congested, much discolored and roughened, and presented numerous shreds of grayish lymph. The most dependent portion of the invaginated mass (where the colon was doubled upon itself again to form the internal layer) presented a slit-like orifice

with thick rounded lips, not unlike the os of a multiparous uterus. An incision was made through the middle layer of the invaginated mass (formed of transverse and descending colon). The wall of the bowel was at least one-fourth of an inch in thickness, softened and intensely congested. The space between the middle and internal layers of the invagination was occupied by recent succulent lymph, presenting already numerous delicate organized fibrillar trabecule. The vermiform appendix of the cæcum was found coiled up in this space, imbedded in the lymph. It was about one and a half inches from the lowest part of the invaginated mass. The entire length of the invagination was seven inches, so that the amount of bowel invaginated was at least fourteen inches, but, owing to its puckering and plication, was probably nearer eighteen inches. The extreme congestion and thickening of the invaginated bowel had led to its firm incarceration, so that it was impossible to withdraw the ileum, even by the use of considerable force. The intestine above the point of intussusception was distended with fluid yellowish fecal matter. The rectum contained a little blood-stained mucus.

Remarks.—This case confirms the result of the statistics of invagination, that this accident is most frequent between the third and sixth months of life. It also illustrates the fact that in infants the almost invariable seat of the invagination is the lower end of the ileum, which passes into the cæcum. As in most cases of fatal invagination in infants, the subject was in vigorous health, and it is extremely difficult to suggest a probable cause. It is most likely that the presence of the large masses of starch and inorganic matter found in the rectum was the cause of the disturbed peristalsis which preceded the intussusception. We can readily imagine how such masses as these, or how even a small portion of such matter, experiencing difficulty in passing the ileo-cæcal valve, would induce violent peristalsis of the lower end of the ileum, which might result in that part of the bowel being protruded through the valve immediately after the escape of the obstruction. In a case reported by Gorham (*Guy's Hospital Reports*, 1st series, vol. iii., 1838, p. 330), occurring in a healthy infant of four months, the only assignable cause was the administration of panada for three days preceding the attack. It is not my intention, however, to comment upon the use of Nestle's Farina for very young infants, nor do I wish to be understood as saying that the masses found in the rectum in this case are evidences of any peculiar unfitness on the part of that article to serve as food for such children. It is most probable that they were due to some defects in the cooking of the food, although it had been prepared carefully by the same person who had been accustomed to cook it from the first time the child took it. The occurrence of a number of cases of invagination also under circumstances where no irregularity or impropriety of diet can possibly be attributed as a cause, warns us that in the present case the existence of these masses in the rectum may possibly have been merely a coincidence, though I confess to regarding them decidedly as the cause of the invagination.

The symptoms in all respects corresponded to the well-known clinical history of invagination. The vomiting was frequent, but never—and this is nearly always the case in infants—stercoraceous. There was an absence of fecal evacuations, but frequent and quite abundant bloody discharges per anum, which constitute perhaps the most constant and valuable symptom of invagination in young infants. The peculiar character of the discharges in this case did not appear until the fourth day, when the bloody mucus became mixed with shreddy flakes of false membrane. Abdominal pain was, as usual, marked. The presence of tumor in this case was not determined until the end of the fourth day, when it was found in the usual place,—in the left iliac fossa. This case confirms the correctness of the opinion

cause have been known. This case had been very judiciously treated by the application of warmth until the circulation had been re-established.

When presented at the clinic, there was considerable atrophy of the right leg, with loss of power in a great degree. He could bear some weight upon the heel, but not upon the rest of the foot. This loss of power had existed for four months.

While investigating the present condition of the affected limb, Prof. Agnew said he could detect no pulsation in the posterior tibial, and but slight pulsation in the anterior tibial. He could feel no lump in the popliteal region, but there was a density and cord-like condition of the vessels of the part. The popliteal artery had been obliterated. There was a little point on the inner edge of the sole of the foot red and exquisitely sensitive, probably a forming abscess, due to an impaired nutrition of the part from the irregular supply of blood. The paralysis was due to the pressure of the original thrombous tumor upon, and probably adhesion to, the popliteal nerve, which is the chief source of nervous supply to the leg.

Prof. Agnew said he thought the condition of the limb would improve in time, and that under the use of tonics and the application of faradization and passive movements to the affected limb the patient would ultimately recover.

CONGENITAL HERNIA.

A little boy, one month old, presented a swelling running from the scrotum along the right groin towards the abdomen. This swelling was congenital, and presented some points of resemblance both to hernia and hydrocele.

If the latter, Prof. Agnew said it would disappear without surgical treatment, for such was always the tendency of congenital hydrocele; if the former, with the aid of a proper truss the result would be equally favorable, as hernia in one so young in nearly all cases admits of permanent cure by this treatment alone. On a further investigation, compression of the abdominal contents was found to increase the size of the tumor, and gurgling was detected on manipulation. Prof. Agnew said this was undoubtedly a hernia, and its transparency due to serum in the hernial sac.

Prof. Agnew then reduced the hernia, and directed the application of a hard rubber truss. He said it was a great mistake not to apply a truss early in these cases, as the earlier the application was made, the more rapid and complete would be the cure.

The truss should be removed twice a day, and the part bathed with alum and whiskey, to prevent excoriation, otherwise apt to occur.

Under this treatment a cure may be looked for in about eight months.

ANCHYLOSIS OF KNEE.

This patient, a boy, aged 8 years, had for the past four years suffered from an affection of the right knee-joint. On exposing the affected limb, the leg was found to be strongly flexed upon the thigh and its muscles atrophied. The knee was swollen and painful, and the patella displaced.

Prof. Agnew said that severe and long-continued pain in the region of joints always produced wasting of the muscles, and such had been the circumstance in this case. The swelling of the knee increased in wet weather, but again diminished when the atmosphere became dry. The motion of the joint was very limited, but it was impossible, without producing anæsthesia, to tell how much of this was due to the will, and how much to ankylosis; but a good deal of the latter undoubtedly existed. There did not appear to be much fluid in the joint, as the patella was in close contact with the bone.

Prof. Agnew directed ether to be administered, and said that, if necessary in order to obtain free motion, tenotomy would be performed.

The patient was etherized, and the limb was straightened without division of tendons. A straight posterior splint was applied, and the boy was sent home, with instructions to keep up extension by means of a metallic splint, jointed at the knee, and in about a week efforts at walking could be made.

AXILLARY ABSCESS.

This was a case of abscess in the left axilla of a man 27 years of age. The abscess had followed a slight contusion of the arm from a fall.

Prof. Agnew said it was not uncommon to see such abscesses in the axilla or groin from trifling injuries of the extremities. They generally indicate a condition of the system requiring tonic treatment.

The abscess not being ready to open, the patient was directed to apply a poultice, and to take fifteen drops of the muriated tincture of iron three times a day.

CYSTIC DISEASE OF THE BREAST.

This was a case of disease of the left breast, occurring in a woman, aged 37 years, who was in other respects in apparent good health. The diseased breast was very much enlarged,—more than double the size of that on the sound side,—and the nipple was displaced to the outer side. The tumor was nodular and elastic, and showed a tendency to point at one part where slight fluctuation was perceived. There was no involvement of the neighboring lymphatic glands, and the veins covering the growth did not seem to be enlarged.

The disease made its appearance during September, 1870, at which time the woman was nursing, and at first was the seat of severe pain; the pain at present, however, is only felt at times, and is never great. Prof. Agnew thought the growth presented every appearance of a cystic tumor.

An exploring-needle was introduced, and over $\frac{3}{4}$ iv of a straw-colored fluid were drawn off through the groove in the needle. Prof. Agnew said this might possibly be the remains of an abscess, but he believed it to be a malignant cystic tumor; and if this were true, he thought no operation would be proper in the case.

NECROSIS OF PHALANGES.

This patient, a boy aged 15 years, had necrosis of the middle and last phalanges of the middle finger of the right hand. The death of these bones was the result of neglected periosteal abscess.

Prof. Agnew, in the course of a few remarks on the necessity for prompt treatment of felons, said that in the early stages, before the formation of pus had commenced, the application of tincture of iodine or caustic to the surface of the affected part would in many cases produce resolution. But after abscess has formed it should be promptly opened and free vent given for the escape of the purulent matter. These abscesses form at various depths from the surface, and are serious in proportion to their proximity to the bone.

In this case amputation of a portion of the finger was the only treatment to be adopted.

The operation was accomplished by making a rectangular palmar flap and removing the diseased bone. The wound was closed by silver wire sutures, and laudanum-and-water applied as a dressing.

DIFFUSED CEREBRAL SCLEROSIS.—In an article on this subject (*New York Medical Journal*, February, 1871, p. 129), Dr. Hammond says of its morbid anatomy that the most obvious feature detected by ordinary observation is the increased hardness and density which the cerebral tissue has acquired. This generally occupies a considerable portion of one lobe, or may extend through the whole of it, or may even affect a whole hemisphere. It is not distinctly circumscribed, but diminishes in intensity from the centre to the periphery, and, according to Pinel, never invades the gray substance.

The increased density is attended with atrophy when the disease affects the adult, and with atrophy and arrest of development when children are its subjects.

Diffused cerebral sclerosis consists in the hypertrophy or increased formation of the neuroglia or brain connective tissue, and the atrophy or disappearance of the proper nervous substance. Atrophy of the brain may, however, be due to other causes than sclerosis, as in the case reported with great minuteness by Schroeder van der Kolk, and several of those cited by Lallemand, Turner, and other writers.

THE MEDICAL TIMES.

A SEMI-MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.

PUBLISHED ON THE 1ST AND 15TH OF EACH MONTH BY

J. B. LIPPINCOTT & CO.,

715 and 717 Market St., Philadelphia, and 25 Bond St., New York.

FRIDAY, SEPTEMBER 1, 1871.

EDITORIAL.

THE ABUSE OF MEDICAL CHARITIES.

THE English medical journals have recently contained much discussion upon this subject, which is no less appropriate to the state of affairs in the large cities of this country. In all of these, dispensaries have multiplied greatly during the past five years, over and above the wants of actual charity. Necessitated by the demands of the system of medical education heretofore adopted in America, they have been rendered the more indispensable in consequence of the recent extension of clinical facilities by all our first-class medical schools, to accommodate which, dispensaries previously existing in connection with them, have been greatly enlarged, while others have been added. Moreover, the increased disposition among medical men of this country to practise specialties has also resulted in additional demand for dispensary facilities, since in no other way can specialties be cultivated to the greatest advantage of those who practise them, either as regards the experience they require, or the reputation they justly seek. We do not wish to be considered as discouraging the extension of clinical facilities, or disparaging those who cultivate specialties; for, on the one hand, we consider the former absolutely essential to the proper education of students of medicine, and, on the other, are ourselves personally interested in special clinical work: so that we cannot be regarded as writing from a prejudiced standpoint.

At the same time, it will hardly be questioned that a constant association during the past ten years with extended dispensary and hospital service has enabled us to collect many facts which have a bearing upon this subject. These all tend to one important truth, that at least one-fourth of the persons thus applying for relief are amply able to pay for advice as well as medicine. Clearly such a state of affairs is improper; but what is the remedy? Shall clinical instruction be abolished and specialties be discouraged? By no means. Yet, while it is admitted that a remedy is not easily discovered, nothing is more certain than that it will never be found if we do not seek it. We therefore desire, if possible, to direct attention to the subject, and to suggest one or two means by which it is thought that the evil may be diminished, if not eradicated. They are wrestling with it abroad, and it becomes us also to look to it here, even though it be conceded, as we think it must, that com-

plete success is impossible; for it is certain that, under any circumstances, aid will be gratuitously furnished to those who could afford to pay for it, while it is equally certain that many who deserve assistance do not obtain it.

We believe that the first step towards correction has already been taken in the efforts now being made to secure a closer union of medical school and hospital; for although bedside or true clinical teaching cannot be said to answer all the demands of clinical instruction, yet it covers so large a proportion that its extension must evidently diminish greatly the necessity for dispensary service. Three advantages will therefore arise from additional facilities of this kind. In the *first* place, a present defect is supplied; *secondly*, experience in this country has shown that there is much less probability of advantage being taken by undeserving patients, since they are less numerous among those who remain within the walls of a hospital; and in Great Britain also the difficulties are not nearly so great with intramural cases as with out-patients' departments and dispensaries; *thirdly*, since fewer dispensary cases are required, the colleges can afford to exercise greater rigidity, either in the exclusion of non-deserving cases, or in demanding compensation for their treatment, instead of holding them at a premium, as they are now almost compelled to do.

But it is asked, "How will this influence the so-called special dispensaries which are springing up around us?" The second alternative in the management of non-deserving cases at the college dispensaries suggests the answer. Certainly none of the young gentlemen connected with them are so firmly self-sacrificing as to *prefer* no compensation for their services if it can be obtained; and although it may be a source of pride to be a member of a profession which does so much for nothing, it must be remembered that there are other obligations than those to self, and that there are those who could not afford to give their services, indifferently, at least, without charge. Such must therefore be excluded from all opportunity to cultivate a specialty, whatever their merits. Moreover, there are none of us to whom it is impossible to meet the fate of the English physician alluded to in a late number of the *British Medical Journal*, who, in reply to a toast, "The Medical Charities of the City and their Officers," said, among other things, "I am proud to belong to a profession which does so much for nothing." This gentleman lived to become dependent upon the charity of his former patients and of his city brethren, though he was a man of cultivated tastes, fine wit, and genial heart.

The difficulty which at once presents itself with regard to such compensation, is the prevention of abuse which might naturally be expected to arise in some instances, if medical officers of charities were permitted to collect their own fees. But a different and only possible course would at once remove the chance of such abuse, and at the same time correct another evil, in support of which time alone can be adduced. This evil is "gratuitous service at hospitals." The laborer is no less worthy of his hire, even if circumstances are such that

he is willing to labor without it; while it is somewhat singular that the most laborious of professions should be so largely uncompensated. Now, if the collections from such cases, instead of passing into the pockets of the physician, were thrown into the coffers of the charity, while the authorities of the latter paid the medical officer,—not, of course, in a princely manner, but to a degree which must remind him that his services are not altogether gratuitous,—both evils would be diminished, and much unthought-of advantage would accrue. It is to be regretted that the Philadelphia Dispensary, comparatively, at least, so wealthy an institution, should have taken a step backward in this respect, when abroad such men as Sir William Fergusson, Dr. Meadows, Mr. Charles F. J. Lord, Dr. Joseph Rogers, Dr. D. Campbell Black, of Glasgow, and others, are laboring to remedy what is now an acknowledged evil.

Dr. Rogers, writing to the *British Medical Journal* for May 27, says:

"It was not until I had been asked to second one of the resolutions at the late meeting in Berners Street that I was induced to look into the statistics of the subject, and then, to my astonishment, discovered that so vast a number as upwards of a million cases of disease were annually seen at these institutions. I state upwards of a million, because I have good reason to believe that a correct return would show even a much larger amount than the figures I quoted, this being (exclusive of the 200,000 cases of disease attended by the district medical officers) above a quarter of a million more than the total of all the cases attended by the 786 dispensary physicians in Ireland, where, it has been asserted, there exist great abuses of medical relief. To suppose for a moment that all this huge amount is made up of really necessitous persons is simply absurd; a careful investigation would probably eliminate three-fourths,—certainly one-half; it will therefore be evident that a very large sum of money is abstracted from the pockets of the profession."

Dr. Black, of Glasgow, writing to the same journal a week later, says:

"To convey some idea of the extent to which the pampering of the population with gratis advice is carried on in this city, take the following: There were treated at the Ophthalmic Institution, during the past year, 2054; at the Skin Dispensary, 1200; at the Eye Infirmary, 3449; at the Glasgow Maternity Hospital and Dispensary, 1060; at the Royal Infirmary, 23,438; at the University Lying-in Hospital Dispensary, 4000; at the Medical Mission Dispensary, 18,672; which makes the large sum total of 53,873 (one-tenth of the entire population). But be it observed that this number does not include the patients treated at the Ear Dispensary, the Dispensary for Diseases of the Chest, the Barony Parish Hospital, the Town's Hospital, nor the very large number treated out-door by the district medical officers. Is it, then, to be wondered—the profession of Glasgow being so redolent of the milk of human kindness—that there should exist such a precipitate downward competition, that the senior practitioners are compelled to take paltry fees, and that the juniors find it difficult to make a livelihood?"

These facts require no comment. Are matters widely different with us?

MEDICAL BENEVOLENT ASSOCIATIONS.

ONE of the most marked outgrowths of Christian charity in modern times is found in the development of various plans for aiding those who may falter or fall in the great race, or for taking care of those who

are thus left without support. Among merchants, small tradesmen, and mechanics, these organizations are very general; they exist, also, to some extent among the clergy in various denominations. There are especial reasons why they should be formed by the members of the most charitable of all professions,—the medical.

It is very rare to find a man who has amassed even a competency by the practice of medicine. There are indeed many wealthy physicians, but they have generally become so either by inheritance, by marriage, or by transactions outside of their professional duties. A great many there are also who live by their practice, perhaps even handsomely, but who have laid up absolutely nothing towards the support of their families in the event of sickness or death. Nor is this always avoidable. The study of medicine is itself so costly, the expenditures necessarily incurred in practice are so great, and the money returns for some years so inadequate, that the embarrassments of early professional life are in many cases hardly shaken off before the energies begin to wane. Ill health does not always wait for old age, but is sometimes brought on by the very activity with which the labors and responsibilities of the profession are undertaken.

In this city alone, among the large body of practising physicians, we have ourselves been cognizant of many cases illustrating the truth of these statements; and we cannot but feel surprised that no plan for their relief has as yet found a place in the long list of charities to which our citizens point with so just a pride.

But three aid-societies of this kind, within our present knowledge, exist in this country: one in Boston—the "Massachusetts Medical Benevolent Society," established in 1857—and two in New York,—the "New York Society for the Relief of Widows and Orphans of Medical Men," founded in 1842, and the "New York Physicians' Mutual Aid Association," founded in 1868. London has three: the "Society for the Relief of Widows and Orphans of Medical Men," dating back to 1788, the "Medical Benevolent Fund," founded in 1836, and the "Royal Medical Benevolent College," founded in 1855.

In some of these societies the members are assessed in a certain sum upon the death of any one of their number. In others, the object is the formation of a fund for the temporary or permanent relief of the pecuniary distress either of needy medical men, or of the families of those who die poor. The latter mode seems to have the greatest capacity for good, and there are doubtless other features which might be added to this main idea, so as to develop a noble and comprehensive scheme of charity.

We most earnestly hope that, whatever the plan may be, a movement will be soon made, and strongly made, to develop, upon a sure basis, a "Philadelphia Medical Benevolent Fund," which shall embrace all the legitimate features of such an institution, and put us at least upon a par in this respect with our professional brethren in London, New York, and Boston. And we should

be glad to see a system of such organizations all over the country, wherever the number of professional men in a given area is sufficient to sustain them.

But it must be remembered that such a movement will come with best grace from the affluent,—from those who are not themselves likely to need assistance. It should be a genuine outpouring of that charity which impels those who have been blessed by Providence with worldly goods to share the burdens of their less favored brethren.

CORRESPONDENCE.

DOUBLE MONSTERS.

TO THE EDITOR OF THE MEDICAL TIMES.

YOUR issue of July 15 contains a letter from Dr. G. J. Fisher, who writes "to correct a few errors in regard to the number and character of the cases" of *Ischiopagus tripus*, cited in my clinical lecture on the Ohio twins (*Medical Times*, June 15).

In so far as Dr. Fisher has spent much time and labor in the study of double monsters, and has given to the profession an admirable essay upon them, his opinion on all matters regarding this subject is certainly entitled to great respect. Yet his communication to you is not altogether above criticism; and since he has courteously set me right on one point, it is but fair in me to serve him a like turn in a like spirit.

In my lecture I stated that "Dr. G. J. Fisher details four such cases" as the Ohio twins;—which is the fact, for he describes four only. But in the bibliography of the general subject of *Ischiopagus* (including the several varieties, such as *dipus*, *tripus*, etc.), which escaped my notice, he refers to the works of Ambrose Paré, Paris, 1575, p. 809. Independently of this reference, I also examined the works of Paré (Lyons, 1652), and, at page 652, found my "fifth case." Dr. F. ought undoubtedly to be credited with the work he has done, and I cheerfully resign to him all right and title to this "fifth case." At the same time, I really think, no "perplexity,"—which Dr. F. seems to fear,—but rather advantage, will result to future investigators from the fact that two persons have cited the same case from different editions of the same author.

Again, Dr. Fisher writes, "The sixth case referred to by Dr. Goodell, of which he says a wood-cut is given by Aldrovandus (*Monstrorum Historia*, Bononiae, 1642, p. 646), is copied from a wood-cut in Lycosthenes (*Prodigiorum ac Ostentorum Chronicon*, etc., Basileæ, 1557, p. 619). It is also copied by Licetus (*De Monstris*, 3d edition, Amsterdam, 1665, p. 113). I have translated a brief account of it, which will be found under Case 38 (p. 254 of Transactions), being one of the four cases which Dr. G. credits me with."

To this statement I can best reply by asking your readers to compare the following description of the two cases, taken, the one from Dr. Fisher's essay, the other from Aldrovandus:

"Case 38, *Ischiopagus tripus*," of Dr. Fisher's collection, is as follows: "Lycosthenes figures and describes a case of double malformation similar to the above cases, which, he says, was born near Oxford, in England, on the 3d August,

1552, only five years previous to the publication of his curious work on Prodigies. It is undoubtedly authentic, as it corresponds in every particular with modern cases. The sex was female. The case is copied and figured by Licetus." (*Trans. New York State Med. Soc.*, 1866, p. 254.) Per contra, my "sixth case" reads thus in Aldrovandus: "Finally, in the township of Pistoja [in Tuscany], March, 1610, the wife of a charcoal-maker gave birth to twins, which were so equally fused together in the region of the pudenda and nates, their heads being at opposite poles, that the sex could not be determined, although more likely female. Both these children, as far as the umbilicus, were perfect in all their members, and had but one anus in common. In addition, another passage in that region was observed, into which two foramina opened. One of these children had but one leg; although the hand of an intelligent surgeon could readily distinguish in it the bones of two legs. This rudimentary leg (*crusculum*) ended in two imperfect feet, supplied with only eight toes, as is shown in Fig. 3,—the wood-cut of this monster."* This figure represents a monster exactly similar to the Ohio twins, "with the single exception of the twist on its axis of the fused limb." In this same chapter Aldrovandus, it is true, describes and figures the Oxford monster, which he cites from Schenchiust and Rueffius.† He also describes another one, born in the same year at "Mildeltostoni in Anglia," but which, to my thinking, is identical with the Oxford monster, although Licetus (*loc. cit.*, p. 87) also gives it as a distinct case. But it seems hardly likely that two monsters of an extremely rare type should have been born in the same year and in the same small kingdom.

It appears, then, that my "sixth case" is not "one of the four cases,"—viz., "Case 38" of Dr. Fisher's collection. Moreover, as Lycosthenes died in 1561, it is manifestly an error to accuse Aldrovandus of borrowing from him the figure and history of a monster which was born in 1610,—forty-nine years after his death. Nor, for the same chronological reason, could Licetus have copied this case from Lycosthenes.

My "seventh case," born in 1845, is an undoubted one of *Ischiopagus tripus*, notwithstanding Dr. Fisher has "not seen an account of it in any of the numerous works which I (he) have consulted." Let me, however, assure him that it has not been copied from Lycosthenes, and that he can very safely "place it with the three-legged group." It will give me pleasure to send to him a copy of this detailed case, or in any other way to further the much-desired completion of his systematic essay on Diploteratology.

I come now, Mr. Editor, to my "eighth case,"—somewhat reluctantly, I admit; for who likes to eat humble-pie? Dr. Fisher has here the right so clearly on his side that I yield me, rescue or no rescue. This case turns out to be a monster of four, instead of three, legs; and for this additional leg—certainly far more welcome to the monster than to myself—I

* In my clinical lecture this wood-cut is incorrectly cited from page 646 of Aldrovandus' work, instead of page 649, as it should have been. Licetus (*De Monstris*, Amstelodami, 1665, lib. ii. cap. 10 and 22), after quoting from Riolanus and Rueffius—but not from Lycosthenes, as Dr. F. contends—the history of the double monster "born in England, near Oxford, in 1552," briefly alludes to my "sixth case," as follows: "His simile natum est monstrum Cutiliani, ditone Pistoriensi, anno Domini 1610, XI Martii, patre Majo carbonatio, matre Geneverâ Masi, ætatis XVI annorum."

† *Observationum Medicarum*, etc., Francofurti, 1609, p. 8.

‡ *De Conceptu et Generatione Hominis*, Francofurti, 1587, lib. v. cap. iii.

ask your readers' pardon. In justice to the gentleman who gave me the reference, I am bound to say that he relied on his memory. But as for myself—well, as I cannot excuse my own carelessness, I shall not ask your readers to do so.

WILLIAM GOODELL, M.D.

PRESTON RETREAT, PHILADELPHIA, August 1, 1871.

TREATMENT OF GANGLION.

THE following, from the *British Medical Journal* for July 1, 8, and 22, 1871, are the methods of treatment of ganglion by some principal British surgeons:

"MR. WOOD passes a spear-pointed needle, cutting on both edges and mounted on a handle, into the cyst, and made to transfix it again and again so as to let out the synovial contents into the areolar tissues of the surrounding fascia. The needle is then made to scarify briskly the interior of the cyst, and is used pretty freely in dividing the cyst-wall, at its opening of communication with the sheath of the tendon. Pressure is then made with both thumbs upon the tumor, so as to squeeze out completely its contents, partly into the subcutaneous areolar tissue, and partly out through the opening in the skin by which the needle entered. Iodine paint is then applied thickly over the surface, and upon it a thick pad of lint, over which firm pressure is made by a bandage. This is kept on for several days, after which the iodine paint is again applied and the pressure readjusted. After a few applications in this way, the tumor seldom reappears, and, if it do so, a repetition of the process rarely fails to succeed. No case has been met with, out of many hundreds treated, in which supuration or any bad results have followed this plan; but several cases in which a seton had been employed have given rise to much trouble and danger from erysipelatous inflammation and abscess, followed by stiffening, and, in some cases, permanent impairment of the use of the limb.

"MR. HENRY SMITH passes a single ligature-thread through the cyst, and allows it to remain according to circumstances. In some instances, severe inflammation, and even supuration, will be produced in forty-eight hours, and then the thread is to be withdrawn. In the majority of instances, however, especially when patients are careful not to use their hand, the seton may be retained for a period varying from three days to a week without producing any inconvenient symptoms; but so soon as supuration takes place, Mr. Smith withdraws the thread, and the cure is almost invariably. It is necessary to bear in mind in this treatment that, in some constitutions and under certain conditions, the presence of the seton may produce very severe consequences; in fact, this is the only objection to the treatment. With care this rarely occurs; and there has only been one instance among Mr. Smith's patients at the hospital where bad results did happen. This was in the case of an unhealthy man, who applied with a ganglion as large as a crown-piece on the back of the wrist. Mr. Smith passed a seton. The patient did not apply until four days after, and in the mean time most violent inflammation and supuration occurred. Free incisions were necessary, and the wrist-joint itself was threatened for a time; but the use of a splint and careful treatment prevented any mischief. The patient, however, was compelled to remain under treatment for several weeks.

"SIR H. THOMPSON applies, for ordinary and recently-formed ganglia about the wrist, tincture of iodine for four or six weeks, usually with good effect. If they resist this, he passes carefully through the centre, with a sharp needle, a double thread of silk, ties the two ends in a knot, and squeezes the contents out of the needle-opening, and leaves the thread in for three days, applying water dressing. At the end of that time, if a purulent discharge be seen and a little inflammation have taken place, Sir Henry removes the thread and applies water dressing: as a rule there is no trouble with the ganglion. If little or no action be produced by the tiny seton, he leaves it in a day or two longer. Sir Henry has never had occasion to regret this, but once an out-patient at the hospital, who did not attend at the end of three days, returned a week

after the operation with erysipelatous inflammation of the arm. She did badly, and got some permanent stiffness of the hand in consequence.

"MR. CHRISTOPHER HEATH endeavors to burst the cyst by pressure, and, failing this, punctures it with a grooved needle, and applies iodine paint for a few days.

"MR. HOWSE finds a certain number of cases not curable by any of the above methods when the cyst-wall is thick and not capable of being replaced, or where it is situated under dense fascia, as in the palm of the hand. These are, he thinks, best and most expeditiously treated by excision of the cyst in the antiseptic mode. The usual objection to this plan of treatment is the fear of diffuse inflammation supervening. The antiseptic method, however, entirely obviates this objection, and with it, he said, he has no fear of opening the sheaths of tendons even extensively.

"MR. CAMPBELL DE MORGAN (Middlesex Hospital) prefers to leave slight cases of ganglion alone. If troublesome on the back of the wrist, he fairly cuts through them subcutaneously, and keeps on pressure. The large ones on the palm of the hand, if he interferes at all, Mr. De Morgan lays open fully, saving the annular ligament, and dresses with some balsamic tincture. Enlargements of the bursa patellæ he treats with rest and iodine. If they be inflamed and suppurating, he lays them open. When they are indolent, he uses puncture and rest; sometimes setons, though Mr. De Morgan states that he has seen mischief from these. He has seen great good from blistering. Ganglia in the popliteal space he never touches, if he can help it. If it be necessary to interfere, the greatest care should be taken to preserve rest. Inflammation is often propagated to the joint from them.

"The mode of treatment which MR. GEORGE LAWSON (Middlesex Hospital) adopts for the small ganglia on the extensor tendons of the wrist is, first, to try if he can rupture them by firm pressure with his two thumbs while the hand is laid upon the table, and then, by steady rotatory rubbing, to cause the contents of the cyst to be extravasated into the adjacent cellular tissue. He then paints the part with a strong solution of iodine, and applies a firm pad and a bandage. When, however, the ganglion resists the pressure of the thumbs, and cannot in this way be ruptured, Mr. Lawson introduces a tenotomy-knife through the skin, at a short distance from the ganglion, and lays it freely open subcutaneously, and then, by pressure with the fingers, evacuates its contents into the surrounding tissues. The parts are then painted with iodine, and a pad and bandage applied as above stated. Mr. Lawson strongly deprecates the plan of using setons for the cure of ganglia, as on two occasions he has seen the hand nearly lost from diffuse cellulitis which followed this mode of treatment.

"MR. HENRY LEE'S (St. George's Hospital) plan of treating ganglia is to puncture them subcutaneously, and to press out their contents into the subcutaneous cellular tissue every day or two until it ceases to reaccumulate. Mr. Lee lately treated in this way, with success, a ganglion as large as a French walnut, on the instep, of many years' duration.

"MR. WALTER RIVINGTON (London Hospital) invariably punctures the swelling with a fine-pointed bistoury, squeezes out the fluid thoroughly, and then applies a compress tightly for a few days. Failure to cure is, in his experience, rare.

"MR. HOLTHOUSE'S (Westminster Hospital) most frequent method of proceeding in simple ganglia about the wrist is, first to flex the joint to the utmost, and make firm pressure on the tumor with the thumbs. Failing to get rid of it by this means, he passes a single thread through it, again makes pressure as before, and so empties it through the apertures made by the thread. The two ends of the thread are then tied together and a compress applied. In the course of one, two, three, or more days, according to the amount of inflammation set up, the thread is removed, the inflammation subsides, and the ganglion is cured. Mr. Holthouse never adopts this plan of treatment unless he can see the patient within twenty-four hours, lest inflammation of an unhealthy character or too violent should be set up. Failing this condition, he punctures the tumor with a tenotomy-knife, squeezes out the contents, applies a firm compress over it, and straps it tightly round a splint placed on the palmar aspect of the wrist. There is a variety of ganglion with the pathology of which Mr. Holthouse is not well acquainted. It appears suddenly,

without obvious cause, and cannot be distinguished, either by its appearance or feel, from an ordinary ganglion. It differs from this, however, not only in the mode of its appearance, but in its not forming a perfectly-closed sac. Under pressure, it may be made to disappear completely, and without rupture of its walls: for this reason, Mr. Holthouse always first tries pressure and manipulation of the tumor before resorting to seton or puncture.

"MR. W. ADAMS (Great Northern Hospital) thinks that, in the simplest form of ganglion, such as that frequently seen over the carpus, when recent, rupture of the sac by a sudden blow, or by hard pressure with the thumb, should first be tried, and will frequently succeed, even if it have to be repeated once or twice. This failing, he always resorts to a free subcutaneous section of the sac in different directions, by introducing a tenotomy-knife, and, after transfixing the sac, cutting freely in one direction, and then turning the knife, cutting as freely in the opposite direction. If the thin ganglionic sac appear to yield before the knife, the latter may be partially withdrawn, and the point made to pierce the sac in two or three situations. Firm pressure must afterwards be made by means of a piece of metal or small coin, wrapped round with lint, and kept in position by a bandage for a week. By this means he has generally succeeded in obliterating ganglia by one operation. Occasionally, however, failure occurs, and either the same operation may be repeated, or a seton may be introduced. In employing the seton, Mr. Adams always introduces six threads, and removes three on the following morning. This at once allows the fluid to escape, and relieves the inflammatory tension and pain produced by the seton. The remaining three threads may be allowed to remain for a week or more. From a neglect of this rule of removing half the seton, he once saw acute suppurative inflammation extend to the wrist-joint in a man under the care of the late Mr. Mack-murdo at St. Thomas' Hospital; and the patient died. The preparation, showing complete destruction of the articular cartilages of the carpal bones, is in the museum of St. Thomas' Hospital. Mr. Adams believes the seton to be a perfectly safe and reliable remedy, if half the silk be removed on the day following its introduction; but it may occasionally fail, and in two instances he has cured an obstinate ganglion by a second introduction of the seton. To what extent ganglion may be dissected out with safety he cannot say; but in one instance, mistaking the character of the tumor, Mr. Adams dissected out a large ganglion of a flattened and lobulated shape, which had formed over the extensor tendons as they cross the ankle-joint. He mistook it for a fatty tumor, such as he has seen in the forearm. On section, the ganglion was seen to be thick-walled and loculated; and, from its flattened and expanded form, he does not think a seton could have been employed. Metal sutures were used, and Dr. Richardson's colloid styptic with cotton-wool applied. Union by the first intention took place. Old thick-walled bursal tumors over the patella, we know, have frequently been removed with safety.

"MR. SPENCE (Edinburgh Royal Infirmary) long since abandoned the old plan of bursting or breaking up the swelling by force; it almost uniformly failed to effect a cure. The cyst gave way at its weakest point, and the contents were diffused, and the tumor disappeared at the time; but the irritation produced seldom sufficed to obliterate the secreting cyst, and the swelling soon reappeared. Mr. Spence's general procedure in the smaller swellings (as at the wrist) is to use a strong double-edged needle (an old-fashioned cornea-needle), introduce it subcutaneously into the cyst, and move it freely about in all directions, so as to tear up the cyst as completely as possible; he next applies a firm compress over the part for a day or two, and then a fly-blister is applied. This method Mr. Spence finds sufficient in ordinary cases. In larger cysts, or where the contents are fluid (as in those connected with the hamstring tendons in the popliteal space), he draws off the contents with a trocar and canula, and injects tincture of iodine. This method rarely, if ever, fails in such cases; but it is not generally applicable, or rather very rarely applicable, to the ganglia at the wrist, the contents of which are too viscid to pass out by any canula of such a size as can be used in these smaller swellings. He has, however, used it successfully in a few cases. When the cyst is very dense, and its form and connections are tolerably well defined, Mr. Spence

dissects the swelling out as a whole; or, if he find that its deeper attachments would involve much dissection, he removes as much as possible of the projecting portion of the cyst, and applies iodide or nitrate of silver on the remaining cystic surface. If the superficial incision be free, and undue manipulation be avoided, it is wonderful, Mr. Spence has observed, how little irritation follows, even in cases where we are obliged to leave a part of the cyst. In many cases the cyst is easily removed entire. He lately removed a large ganglion connected with the inner hamstring muscles from the popliteal space. It was of the size of a very large orange or small melon. He has not yet had time to examine its interior, but it was the largest he had yet seen.

"MR. ANNANDALE (Edinburgh Royal Infirmary) treats the simple ganglia met with over the dorsal aspect of the hand and foot by endeavoring to rupture them with the thumb; and, if this succeed, he applies a firm pad over the part for some days. If they will not rupture by external pressure, he opens the cyst subcutaneously with a fine tenotomy-knife, presses out the contents, and then applies a blister, followed by pressure with a pad. The ganglia containing seed-like bodies, usually occurring on the palmar surface of the wrist, Mr. Annandale treats by making a free incision into the sac, squeezing out all the contents, and dressing the wound carefully according to the antiseptic method. The chronic enlargement, with effusion of the bursal cysts over the patella, olecranon, and other bony prominences, he treats by a limited incision into the sac, and the introduction into the wound of a small piece of lint or other cloth soaked in carbolic oil, one part of the acid to ten of oil, which is removed at the end of twenty-four hours, the wound being then dressed with water or other simple dressing.

"DR. EBEN WATSON (Glasgow Royal Infirmary), when the ganglion is small and cystic, as it is usually on the back of the wrist, practises subcutaneous section of the cyst, allowing the fluid to pass into the areolar tissue. Moderate pressure is then applied, to facilitate absorption, and, if this be slow, a blister may be used. In the more extensive cases, in which the sheaths of tendons are greatly dilated, as in the palm of the hand, he would pursue a similar treatment, and believes it would be successful. He once performed the free incision of the sheath and annular ligament, as recommended by Mr. Syme, but the patient nearly lost her life by reason of the violent inflammation of the areolar tissue of the whole arm which followed. If such a case presented itself to him now, and if subcutaneous section, in which he has great confidence, had failed, he would make one free incision above or below the annular ligament, and dress the wound carefully with spirituous solution of carbolic acid,—of course after emptying the sac. Dr. Watson's experience leads him to fear too much inflammation in the dilated sheath after operative interference, rather than too little; therefore he has not had occasion to use setons or iodine injections. He would rather not advise either of them.

"The treatment which DR. FIDDES (Aberdeen Royal Infirmary) adopts with regard to ganglion on the wrist and hand is puncture with a grooved needle, pressing the fluid out of the sac, and afterwards applying constant pressure. Dr. Fiddes never saw any outward application, such as iodine paint, etc., do good."

SURGEON H. F. PATTERSON, of the Royal Artillery (*N. Y. Med. Jour.*, Aug. 1871), writes to the *Lancet* that he has for some time successfully treated cases of gonorrhoea with water only. He begins with injections of lukewarm water, and continues them hourly until chordee and scalding cease, and then uses cold water in the same way until the case is cured. He uses no internal treatment, unless an occasional saline aperient, and says he has not had a single failure.

REVACCINATION BY SECONDARY LYMPH.—As the result of some recent observations by Dr. J. B. Barbour (*Lancet*, July 29, 1871), Physician and Medical Superintendent of the Metropolitan Fever Hospital, Stockwell, it would seem proven—or better, in the author's words, "it is in the highest degree probable"—that revaccination by secondary lymph—that is, lymph taken from a vesicle produced by a secondary vaccination—does not protect from smallpox.

REVIEWS AND BOOK NOTICES.

AN INTRODUCTION TO THE OSTEOLOGY OF MAMMALIA. By WILLIAM HENRY FLOWER, F.R.S., etc. London, Macmillan & Co., 1870.

The work before us consists of a series of lectures,—a reprint of the author's first discourses before the Royal College of Surgeons. Within the space of a 12mo volume of 329 pages in fair type, it may readily be seen, an exhaustive treatment of the subject is impossible. The plan of the author has been to present a general outline to the student. His style is clear and easy. Little attention is given to animal mechanics, nor is much said of the embryological basis of the mammalian skeleton,—opportunities lost, as we believe, to present the subject in its most attractive light. The analysis of the "hand" and "foot" fails to attract the author's attention beyond the identification of their component parts. We remember hearing a distinguished physicist remark of a certain class of zoologists that they reminded him of so many shopkeepers taking inventories,—i.e. collecting bare facts without caring to observe their relations. Mr. Flower, to judge from the present volume, has placed himself in a similar category among anatomists. He has taken an inventory of recent mammalian bones, and, having identified them with those in the human skeleton, has rested content. The student will find in this work a reliable guide, but will be disappointed should he expect in it a philosophical or suggestive treatment of the subject.

GUY'S HOSPITAL REPORTS. Edited by C. HILTON FAGGE, M.D., and ARTHUR E. DURHAM. Third Series, vol. xvi. 8vo, pp. xviii., 587. London, J. & A. Churchill, 1871.

This volume of these time-honored reports contains twenty-two articles, by seventeen members of the staff of the hospital. The papers are very far from being mere records of the practice of the house, although most of them are founded upon cases which have occurred within its purlieus; and we notice with pleasure the absence of those long treatises, upon subjects but remotely allied to medicine, which find a place in so many hospital reports. That so many men connected with the hospital can be induced to aid in the composition of the reports, shows of itself how high is the estimate of their value in England; and it is very gratifying to see the *esprit du corps* sufficiently strong to triumph over the heart-burnings and petty jealousies which so often exist and are so detrimental to concerted action.

Mr. Poland continues his exhaustive paper upon Subclavian Aneurism, considering in one hundred and thirty-two pages the various plans of treatment which have been adopted for the relief of this very serious affection. Should the conclusion of the work, which is promised for the next volume, be as valuable as the two parts already published, it will prove a most important contribution to surgical literature. At the same time, we regret that these papers should not be published in monograph form, as being so much more convenient for reference than distributed as they will be among three separate volumes; then, again, they form an elaborate treatise, in every respect worthy of separate publication, while they are rather out of place in their present position, being hardly records of the work done at Guy's. On page 25 an aneurism is spoken of as resembling a "poison sausage." Who can tell us what that is? Can it possibly be Cockney for Bologna? though we can hardly suppose that Englishmen, who generally claim to be purists, would abuse the old Italian city by so translating its name.

Dr. Pye-Smith contributes a paper, illustrated by a plate, upon Retroperitoneal Hernia, and an article on Left-Handedness. In a note to the latter, on page 142, it is stated that the author has never known any one use the entire left half of the body in shooting, though he has met with several who use the left eye only. We have known several sportsmen whose practice entirely controverts this statement, and we happen to be intimately acquainted with one who always places the butt of his gun to the left shoulder, sights with the left eye, and pulls the trigger with the left forefinger.

The same author, in conjunction with Messrs. Howse and Davies-Colley, publishes some Notes on Abnormalities observed in the Dissecting-Room during the Sessions of 1868-69 and 1869-70, and a lithograph is given picturing a muscle running from the coracoid process to the under surface of the clavicle.

We have read with pleasure and profit a paper by Dr. Wilks on Adherent Pericardium as a Cause of Cardiac Disease, a circumstance shown to be of more frequent occurrence than is generally admitted. From his researches among the post-mortem records of Guy's, as well as from the results of his own experience, Dr. Wilks is almost inclined to offer the proposition "that in a well-marked case of disease with cardiac symptoms in young persons without any valvular bruit, pericardial adhesions may be fairly expected." There are two other articles upon diseases of the heart in this number, one of which is also by Dr. Wilks, and the remaining one is from the pen of Dr. Fagge.

The obstetric department of the hospital is represented by three contributions. The first is one by Dr. Hicks on an outbreak of diphtheria as it occurred in the obstetric wards. The disease made its appearance about a week after one of the patients had suffered from what appeared to be a mild attack of scarlatina, and only yielded to complete evacuation of the apartments infected. The second is a paper by Dr. Phillips recording eight cases of puerperal convulsions treated without bleeding. Chloroform was given in all, with the happiest results, as all made good recoveries. They were, however, of different degrees of severity, and are thought by the author of the article to be too few to establish the treatment; yet the marked success which accompanied the plan is certainly very encouraging. Dr. Phillips is also the author of a paper describing the delivery of a two-headed monster, the anatomy of which is given by Mr. B. N. Dalton and illustrated by two plates.

Dr. Moxon contributes an article on Syphilitic Disease of the Spinal Cord, and one on the Nature of Atheroma of the Arteries, each paper being accompanied by a plate showing the gross and microscopical appearances. Mr. Bader continues his Description of the Appearances of the Human Eye as seen by the Ophthalmoscope, this, the fifth series, showing the morbid appearances in inherited and contracted syphilis. The plates are the usual handsome chromo-lithographs. Mr. Hinton has papers upon the Treatment of Perforations of the Membrana Tympani and on the Relation between Chemical Decomposition and Nutrition. Dr. Wilks has a paper narrating some cases of General Paralysis, with a few remarks on Nerve-Pathology, which is interesting, as in fact are most of the articles by this author. Dr. Habershon contributes an article of great interest and value on Some Obscure Forms of Abdominal Disease, a subject he is so eminently fitted to discuss authoritatively; but the individuality of the cases is too marked to allow of our noticing them as a group, and space does not admit of an abstract of their details. Mr. Forster and Mr. Poland each contribute records of miscellaneous surgical cases, interesting in themselves; but we are impelled to treat them in the same manner as we have treated Dr. Habershon's paper, and for the same reason.

Mr. Birkett narrates a Case of Exostosis of the Frontal Bone growing into the Cranium, of very great surgical interest, both from its rarity and the careful manner in which it is told. It occurred in a girl fifteen years old, who had first noticed a swelling on the forehead twenty-two months, and some displacement of the eyeball about nine months, previously. Four months before she came into the house she had a fit, suddenly becoming unconscious, and her medical attendant at the time had lanced the tumor, which had become fluctuating, at the inner angle of the orbit. It discharged then, and continued to do so until her admission into the hospital, a tenacious mucoid material. The centre of the tumor corresponded to that of the left frontal sinus, and the case was supposed to be one of ivory exostosis growing from the wall of the sinus and obstructing the communication with the nose. After waiting some time to watch the progress of the disease, Mr. Birkett cut down upon the tumor, which had again become fluctuating from the healing of the lancet-wound, when, without dividing any osseous structure, it came at once evident that a frontal sinus had been opened, the cavity being

filled with mucus, and its walls lined with mucous membrane. With the aid of a gorge and elevator, some small pieces of bone were removed, but nothing like a distinct ivory exostosis could be made out, and, as the posterior wall of the sinus was evidently the one being attacked, fear of opening the cranial cavity led the operator to desist from further efforts, after a vain attempt to pass a probe into the nasal cavity. The operation was followed by some constitutional disturbance and deep-seated paroxysmal pain in the forehead. These symptoms increased rapidly after the eleventh day, and death followed on the thirty-eighth day from the operation. At the autopsy an old abscess was found in the left anterior cerebral lobe, which was thought to account for the first attack of head-symptoms some months previously, and an abscess of recent formation existed in the right anterior lobe, which was regarded as the immediate cause of death. A bony tumor was found growing from the substance of the frontal bone, extending antero-posteriorly to the middle of the anterior fossa of the base of the skull, completely hiding the crista galli, involving the ethmoid bone, and extending transversely into either orbit. The diagnosis that the frontal swelling depended upon retained secretion proved correct; but Mr. Birkett was disappointed in the expectation of finding an ivory-like growth, as the whole tumor was composed of the lightest and most porous kind of bone. The author of the paper does not think that the operation hastened the death of the patient, and the facts appear to bear him out in his opinion, as the growth of bone was of itself quite sufficient to give rise to the abscess which caused her death, and there was no evidence that the cavity of the cranium had been opened by the attempt to remove the tumor. It was not a case, however, in which the uncertainty could cause much uneasiness, as death could not be far distant with such an amount of disease. The appearance of the girl before death, and the results of the post-mortem examination, are represented by lithographs, without a reference to which, we fear, our effort to give an intelligible abstract of the case will hardly be successful.

One of the editors, Mr. Durham, gives us the history of a case of immobility of the jaws consequent upon sloughing after fever, in which he obtained a very gratifying success by two operations,—a success which he thinks may very generally be attained in these cases by boldness of design and perseverance in execution on the part of the surgeon. The case, as Mr. Durham points out, was a very favorable one for surgical interference, the habits and constitution of the man being excellent, and his temper sufficiently tractable to aid the efforts of the surgeon. We agree with the opinion held by the author, that in these cases it is better to depend upon the separation of the cheeks from their substructures, and endeavor to stretch them over the gap, than to resort to transplantation of flaps, whenever this latter plan can be avoided. This paper also has its attendant plate, showing the man's appearance before and after operation.

The last article in the volume, equally interesting to physicians and to surgeons, is that by Dr. Steele, giving a statistical account of the patients treated during 1869. The mortality reached the high rate of 10.56 per cent, which is accounted for, in part, by the fact that, owing to some alterations in the arrangements of the wards, there were fewer surgical cases admitted into the house than usual. And it is well known that miscellaneous surgical cases tend to keep down the average mortality of general hospitals. Again, nearly fifty-six per cent. of the deaths occurred within a week of the admission of the patients into the house, which of itself points to the severe type of the cases applying for treatment within the hospital. Both pyæmia and erysipelas prevailed to a moderate degree, and all attempts to banish these surgical scourges by the use of various disinfectants were followed by but negative results. A large portion of the paper is occupied with a consideration of the method of nursing best adapted to the requirements of large hospitals. An explanation of the manner in which this important work is done at Guy's is given, with a review of the several plans in operation at the different large London hospitals. The whole subject is discussed in a thoughtful and instructive way; but to give our readers a clear account of Dr. Steele's views on this vexed question would require more space than will be occupied by this entire notice.

Appended to Dr. Steele's remarks are the usual statistical tables, somewhat modified from those of former years.

It is a difficult task to notice in a general way a volume of so miscellaneous a character as the one before us, and we have merely selected for particular remark what is most interesting to us, though perhaps other readers would be most impressed with other papers. To use terms of commendation of a work so well and favorably known seems superfluous, and we will only add that we cannot speak too highly of the value of this volume regarded as a whole. Upon comparing it with the numbers which first issued, three times in a year, from Guy's Hospital thirty-five years since, adorned with the names of Cooper and Bright, of Addison and Key, with a host of other worthies, we feel that this serial, at least, has maintained its high reputation. We would recommend the perusal of this volume to all, and we know of no medical subscription which more fully compensates for the expenditure involved. That an index would materially add to the value of these reports is a remark that has been frequently made on this side of the Atlantic, and one which we heartily endorse, though we almost despair of influencing by any criticism of ours the London editors, who, we presume, hold themselves above American opinion. We have, however, some hopes that our English brethren, who have proved themselves cosmopolitan in the recognition and adoption of all practical advance in science, may add what their own common sense must approve.

DYNAMICS OF NERVE AND MUSCLE. By CHARLES BLAND RADCLIFFE, M.D., F.R.C.P., etc. 8vo, pp. 288. London, Macmillan & Co., 1871.

Starting out with the proposition that the key to the dynamics of nerve and muscle lies hid among the facts belonging to animal electricity, this volume is a learned disquisition on the electrical conditions of nerve and muscle, and the application of such conditions to account for the phenomena evinced by these organs. Based largely upon experimental research of a most laborious kind, the essay no doubt exhibits as accurately as is possible on such a subject the present state of our knowledge of animal electricity, the history of the discovery of which is well given in the first chapter.

Though Aldani, Galvani's nephew, published in 1803 some experiments which furnish further evidence of the existence of animal electricity, Nobili, in 1827, furnished the first unequivocal proof of the real existence of animal electricity, while MM. Matteucci and Du Bois-Reymond have left no room for entertaining any doubt as to its existence.

Since in the phenomena of this agent lies the key to the dynamics of nerve and muscle, the natural result of reasoning thus based is the adoption of the physical theory of life, or of what was formerly called life; for the term would now scarcely seem appropriate, since it was employed to indicate the presence of a set of phenomena called *vital*, to distinguish them from the *physical* phenomena with which they are now admitted by those reputed most learned to be identical. No other term has, however, been as yet suggested.

The author's position is early taken. Thus, in his Preface, p. xi, he says:

"For the rest, I must only say broadly that the general view of the dynamics of nerve and muscle proves to be in strict accordance with this partial view, and not with the view which assumes that muscle and nerve have a special life which expresses itself in contraction or sensation, as the case may be."

Again, in his Conclusions, p. 286, the author says that, "instead of regarding the state of action in nerve and muscle as a manifestation of vitality, there is indeed reason to believe that it must be brought under the dominion of physical law in order to be intelligible, and that a different meaning, also based upon pure physics, must be attached to the state of rest."

It would be impossible in the space permitted us to review a volume of this description, if indeed an essay made up, in part at least, of propositions followed by demonstrations of an experimental character, admits of review. Suffice it that the results of these demonstrations have their illustrations drawn from the physiology and pathology of the more ordinary as well as the extraordinary phenomena of life: the action of the blood in producing muscular motion; the action of nervous influence on muscles; the phenomena of rhythmical muscular

action as elucidating the action of nerve and muscle; the nature of muscular action, the nature of rigor mortis, and the nature of nervous action. From a pathological point of view is considered muscular action as manifested in epilepsy and other forms of convulsion, common trembling and other forms of tremor, tetanus, and spasms; so also *sensation*, as exhibited in neuralgia and other forms of neuralgic disorder.

From a statement of the conclusions, however, may be inferred the importance of the subjects covered by the work of Dr. Radcliffe:

"There is reason to believe that all kinds of electricity act upon nerve and muscle by way of charge and discharge,—the charge antagonizing, the discharge permitting, the state of action.

"There is reason to believe that blood acts upon nerve and muscle, not by causing the state of action, but by antagonizing it.

"There is reason to believe that 'nervous influence' acts upon nerve and muscle, not by causing the state of action, but by antagonizing it.

"The whole case is simple enough. It would seem indeed—(1) That the sheaths of the fibres in nerve and muscle are capable of being charged like Leyden jars, and that during the state of rest they are so charged. (2) That the sheaths of the fibres in muscle are highly elastic. (3) That the fibres of muscle are elongated during the state of rest by the charge with which their sheaths are charged, the mutual attraction of the two opposite electricities disposed Leyden-jar-wise upon two surfaces of the sheaths, compressing the elastic substance of the sheaths, and so causing elongation of the fibre in proportion to the amount of the charge. (4) That the muscular fibres contract when the state of rest changes for that of action, because the charge which caused the state of elongation during rest is then discharged, and because this discharge leaves the fibres free to return, by virtue of their elasticity simply, from the state of elongation in which they had been previously kept by the charge, and that the degree of contraction is proportional to the degree of elongation previously existing. (5) That the fibres of nerve are not affected in the same way as fibres of muscle by the charge and discharge of electricity, because the sheaths of the fibres may be wanting in the requisite degree of elasticity. (6) That the blood antagonizes the state of action in nerve and muscle by helping to keep the natural electrical charge which antagonizes action. (7) That nervous influence antagonizes the state of action in nerve and muscle, by helping to keep up the natural electrical charge which antagonizes action. (8) Diminished efflux of blood to certain nerve-centres leads to excessive action in nerve and muscle, by disturbing the electric equilibrium of the nervous system which is maintained during the state of rest, this disturbance causing a partial reversal in the relative position of the two electricities with which the sheaths of the fibres are charged, and so necessitating the discharge which is the basis of the state of action; for, by this partial reversal, sheaths of which the charge has become negative at the sides and positive at the ends are brought into juxtaposition with sheaths of which the charge remains positive at the sides and negative at the ends,—are brought into a relation which necessitates discharge, for discharge must happen when opposite electricities come together." (Pp. 286-8.)

Many of these conclusions are sufficiently striking to excite the attention of those who are interested in the subject to the volume, by a careful study of which alone can it be determined whether the views held by the author are proven.

The unusually handsome manner in which the volume is issued by Macmillan & Co. invites attention; and, although the superficial reader may be disappointed in a comparison of the contents with its dress, for the thoughtful student it contains much to interest and incite to original investigation.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Delegate of the Fulton County Medical Society, with the Report of its Committee. Also a History of the Controversy between the Old Board of Trustees and the Faculty of the Atlanta Medical College and the Fulton County Medical Society to the Time of its Introduction into

the Georgia Medical Association. Also embracing the Actions of the Georgia Medical Society and the Macon Medical Association, with a History of the Controversy from its Introduction in the Georgia Medical Association to its Late Action at Americus, Ga. Also Dr. George G. Crawford's reply to an article, styled "A Statement of Facts," in the *Atlanta Medical and Surgical Journal* for May, 1871. Also Dr. E. J. Roach's Statements. Pamphlet, 12mo, pp. 102. Atlanta, Ga., Franklin Steam Printing-House, 1871.

A Review of Darwin's Theory of the Origin and Development of Man. By James B. Hunter, M.D. Reprinted from the *Journal of Psychological Medicine*, July, 1871. Pamphlet, 8vo, pp. 19. New York, D. Appleton & Co., 1871.

Minutes of the Twenty-Second Annual Meeting of the American Medical Association, held in the City of San Francisco, May 2d, 3d, 4th, 5th, 1871. Published by William B. Atkinson, M.D., Permanent Secretary, 1400 Pine Street, Philadelphia.

The Federal Government, its Officers and their Duties. By Ransom H. Gettel, formerly a Member of Congress from St. Lawrence County, N.Y. 12mo, pp. viii., 444. New York, Woolworth, Ainsworth & Co., 1871.

Restorative Medicine. An Harveian Annual Oration, delivered at the Royal College of Physicians, London, on June 21, 1871 (the 210th Anniversary). By Thomas King Chambers, M.D., etc. With Two Sequels. 16mo, pp. 85. Philadelphia, Henry C. Lea, 1871.

Practical Midwifery and Obstetrics (including Anæsthetics). By John Tanner, M.D., M.A., LL.D. With 115 Illustrations. 16mo, pp. 237. Philadelphia, J. B. Lippincott & Co., 1871.

Ninth Annual Announcement of the Philadelphia Dental College, Nos. 108 and 110 N. Tenth St. Philadelphia, 1871.

Third Annual Announcement of the Kansas City College of Physicians and Surgeons, Session 1871-72.

Address to the People by the Directors of the Pennsylvania Sanatorium. Pamphlet, 8vo, pp. 16. Philadelphia, Henry B. Ashmead, 1871.

Transactions of the Minnesota State Medical Society. St. Paul, Pioneer Printing Company, 1871.

On Bone-Setting (so called), and its Relation to the Treatment of Joints crippled by Injury, Rheumatism, Inflammation, etc. etc. By Wharton P. Hood, M.D., M.R.C.S. 12mo, pp. ix., 156. London and New York, Macmillan & Co., 1871.

On Some Disorders of the Nervous System in Childhood: being the Lumleian Lectures delivered at the Royal College of Physicians of London, in March, 1871. By Charles West, M.D. Philadelphia, Henry C. Lea, 1871.

GLEANINGS FROM OUR EXCHANGES.

A CASE OF *TÆNIA MEDIOCANELLATA*.—At a recent meeting of the Academy of Natural Sciences, Prof. Joseph Leidy made the following remarks on *Tænia mediocanellata*:

"Recently, one of our ablest and most respected practitioners of medicine submitted to my examination a tapeworm which had been discharged from a young man, after the use of the *Aspidium filix-mas*. The physician, in giving an account of the case, stated that he had previously treated the patient for another affection, in which raw-beef sandwiches had been prescribed for food. After looking at the worm, I remarked that it appeared to be the *Tænia mediocanellata*, a species which I had not before seen, and added that the patient had probably become infected from a larva swallowed with the raw-beef sandwiches. The specimen consisted of the greater part of the worm, broken into several pieces. Including some lost portions, it was estimated to have been upwards of thirty feet in length. Unfortunately, the head proved to be absent; but, so far as characters could be obtained from the specimen, in the form of the segments, position of the genital orifices, and the condition of the ovaries,

it agreed with the description given of *T. mediocanellata*, rather than with *T. solium*. From a want of acquaintance with the former, I did not feel entirely satisfied that the specimen actually belonged to that species.

"Subsequently, my friend brought to me the anterior part of the body, probably, of the same individual tapeworm. He observed that, his patient continuing to complain, he had administered another dose of the male-fern, which was followed by the expulsion of the portion of the worm now presented. The head of the parasite was included, and it confirmed the view that it pertained to the *Tenia mediocanellata*.

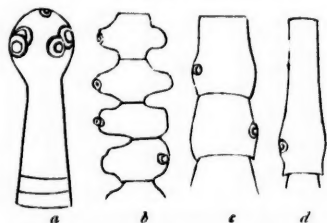
"The case serves as another caution against the use of raw flesh as food.

"The description of the worm, as derived from the specimen, is as follows:

"The head is white, without pigment-granules, obtusely rounded, unarmed with hooks, and unprovided with a rostellum, but furnished with a minute acetabuliform fovea at the summit. The four acetabula are spherical and opaque white. The diameter of the head is three-fourths of a line. The neck, or unsegmented portion of the body immediately succeeding the head, is about four lines long by half a line in breadth. The most anterior indistinctly-defined segments of the body, and those immediately succeeding them, but more distinctly separated, are about one-fifth of a line long by two-fifths of a line broad. In a more posterior fragment of the body, the flat and nearly square segments measure half a line long and a line broad, to one-third line long and $2\frac{1}{2}$ lines broad. A succeeding fragment exhibits segments $3\frac{1}{2}$ lines long by 4 lines broad, and 2 lines long by 5 lines broad. Many of the segments in this piece are irregularly separated, laterally, by deep, wide notches. In a succeeding long portion of the worm, the segments are wider behind than in front, and measure 2, 5, and 3 lines long by 5 lines broad. In a long piece of the posterior part of the worm, the segments are first 4 lines long and broad; and in the last four feet of the same piece the segments are clavate in outline, from 6 to 10 lines long, and 2 and 3 lines broad.

"The genital apertures are conspicuous, and are situated behind the middle of the segments. They alternate irregularly. Thus, in the last two feet of the posterior fragment of the worm, the first two segments exhibit the aperture on the left margin; the succeeding segment presents the anomaly of an aperture on both margins; then follow three apertures on the right, next two on the left, then four on the right, then eight alternating in pairs, then one on the left, and so on. The ovaries are opaque white, and exhibit numerous closely-crowded lateral branches.

"In the absence of pigment-granules to the head, and in the less robust character of the worm, the specimen differs from *T. mediocanellata* as described by Küchenmeister. The minute acetabular pit or fovea at the summit of the head is not mentioned by Küchenmeister and subsequent observers as a character of that species. It is a point, however, that might be readily overlooked, especially if the parts of the head are obscured by the presence of pigment granules.



"a. Head and neck magnified. b. Form of segments in an anterior fragment of the worm. c. Form of segments in an intermediate fragment of the body. d. Form of segments at the posterior part of the worm."

THEORY OF THE MODE OF ACTION OF DIGITALIS, AND THE INDICATIONS FOR ITS USE.—Dr. J. Milner Fothergill, in the Hastings Prize Essay (*British Medical Journal*, July 8, 1871), accepts unhesitatingly the theory announced by Dybkowsky and Pellikan abroad, and supported by Handfield Jones, Fuller, and others in England, that digitalis acts as a stimulus to

the cardiac ganglia. The following are the conditions calling for its use:

"The patient complains of a feeling of anxiety about the precordia, with a general unaccountable anxiousness,—a sense of difficulty of breathing, which is notably increased upon exertion; he has fluttering about the left breast amounting to palpitation upon effort or exercise; the pulse is irregular, or may be regular but compressible; then come a dusky complexion and impeded respiration. Here, then, is a condition of cardiac engorgement which would scarcely be disputed, whether as a passing condition or as one in a series of similar attacks. On examination of the case, there can usually be found a feeling of diffused impulse on palpitation, a large mass apparently being thrown into contact with the thoracic walls; percussion reveals an increased general dullness, frequently in the direction of the right side of the sternum. Auscultation communicates to us the further information that there is a short slapping sound, with or without irregularity, or, perhaps, evidence of laboriousness,—a heaving swell with obvious effort, which, however, is not followed as effect by that impression on the arteries we might look for; and, finally, there is a something beyond this, utterly undecipherable by words,—a peculiar significant information conveyed, which experience and repeated observation alone can understand or interpret. Those who have made heart-disease a study will readily understand and supply that which I feel incompetent to convey. Or, in other circumstances, the patient has a tickling cough, feels short of breath on exertion, has a slight attack of bronchitis, or may be no particular ailment; the pulse is small or feeble, but, on casually applying a stethoscope, there is found a state of cardiac excitement with some irregularity in time,—action like imperfect palpitation, but without any evidence on the radial pulse. It is nevertheless there, and percussion soon demonstrates that there is increased dullness to the right side of the sternum, and auscultation reveals corroborative information in adding a marked accentuation of the second sound at the pulmonary valves. The aggregation of sounds demonstrates that there is embarrassment and also laboriousness in the right ventricle; it is not likely to be accompanied by any effect on the radial pulse; and even the discriminating sphygmograph is thrown out, for there is no increased arterial tension anywhere where it can be applied. The trouble is going on in the right side; the diminished amount of blood passing into the left ventricle is insufficient to allow any impression to be made on the arteries, even if, as is very probable, the left ventricle is acting somewhat excitedly. From the number of fibres which belong equally to the right and left ventricles, and can be traced into each (see the works of Searle and Pettigrew), such community of action, even where there is no call on the left ventricle, is almost unavoidable."

NEPHROTONY.—Dr. Meadows (*British Medical Journal*, July 8, 1871) performed the operation of nephrotomy on July 1, under rather peculiar circumstances. The operation was performed for the relief of a patient who presented the symptoms usually recognized as those of ovarian dropsy, but, on opening the abdomen, the tumor was found to be a large cyst of the kidney. The true structure of the organ had almost entirely disappeared, while the other kidney was apparently healthy. Dr. Meadows, in the belief that the removal of the diseased organ presented the best method of treatment, accordingly applied a ligature, as in the operation for the removal of ovarian tumor. The case proved fatal on the sixth day, from hemorrhage from the pedicle.

TOXIC ACTION OF QUINIA.—The following account of the effects produced by quinia, condensed from notes furnished by the patient herself, is from the *British Medical Journal*, April 8, 1871:

"My first recollection of taking quinine is that, when about sixteen, I was weak, and had medicine ordered. The first dose I took at bedtime. I passed a very restless night, and in the morning my whole head was swollen, and the face so altered that I could with great difficulty open my mouth to take food. The cause was unsuspected. Some time afterwards I took a glass of port wine from a wineglass in which medicine had been previously taken. But a very small quantity remained in the glass of the quinine solution; yet the

same condition of swelling of the face, etc. came on, but not severely. Once again, when recovering from smallpox, I took some quinine, and had large wheals with local redness over neck, chest, and arms. All preparations of bark affect me more or less in this way."

TUBERCLE IN THE LEFT OPTIC THALAMUS.—Dr. L. Fleischmann reports (*Wiener Med. Wochensch.: Centralblatt*, April 8, 1871) the case of a boy, two years old, who up to three months before coming under observation had enjoyed good health. At that time, however, he was suddenly affected with trembling in the right hand; suffered from intense pain and loss of power in the right leg. The head was at first drawn to the right, afterwards towards the back. At the same time there was ptosis of the left eyelid, dilatation of the left pupil, and paralysis of the right facial nerve. The child often cried out during the night. The affected muscles on the right side at first contracted upon the application of electricity. Towards the close of life there were involuntary discharges from the bowels and bladder. At the autopsy, a cheesy mass, about the size of a chestnut, was found in the left optic thalamus and projecting into the left ventricle. The left crus cerebri was softened, and the fibres on its inner border were entirely destroyed.

CASE OF POISONING BY CHLORAL HYDRATE.—We find in the *British Medical Journal* for February 25, 1871, the record of another case of poisoning by this drug. The victim was a clergyman, æt. 51, who had been in the habit of using chloral in small quantities. The exact quantity taken the night before his death was not ascertained, but during the ten days which immediately preceded it he must have taken fourteen or fifteen drachms. At the autopsy a good deal of congestion of the cerebral membranes was found, together with some effusion of serum. The brain was pale, very soft, and friable. There was no increased vascularity in any part except the choroid plexus; no effusion in the ventricles, nor extravasation of blood.

ON THE USE OF CHLORAL HYDRATE.—In his lecture "On Experimental Medicine" (*Medical Press and Circular*, February 25, 1871) Dr. Richardson took occasion to refer to recent fatal cases from the use of hydrate of chloral. He said that now that its action is better understood, and the novelty all worn off, the employment of the hydrate by the profession is less common than it was some months ago, while the practice of resorting to it by the public is on the increase. As showing this increase, Dr. Richardson said that he had been able to estimate that nearly fifty tons of the agent had been used in England in the last eighteen months. He was inclined to think 120 grains a dangerous and 180 a fatal dose,—the former dose being as much as a healthy adult could decompose and eliminate in twenty-four hours. He, moreover, thought that chloral differed from opium in this important point, that the dose of the former cannot, like that of the latter, be gradually increased, except in the most limited degree, without immediate danger.

FORMATION OF BLOOD-CORPUSCLES.—Prof. Neumann, continuing his observations on this subject (*Quarterly Jour. Mic. Sci.*, July, 1871, from *Archiv der Heilkunde*, Bd. xii. p. 187, 1871), has observed colored nucleated cells, which he regards as transitional forms between the white and red corpuscles, in several instances in the blood of new-born children (born at full terms), and concludes that the embryonal formation of blood must go on till a later period than has generally been supposed,—certainly beyond the fifth month indicated by Paget. Further researches must show how long these embryonic forms survive after birth; they were found wanting in the case of a child who died at sixteen days. Kölliker had previously found them in the spleen and liver of new-born infants. Neumann has found the same embryonic type of blood-cell in the blood of two persons suffering from leukaemia.

OAKUM.—The use of oakum in surgery instead of lint (says *Good Health*)—highly appreciated in the recent Franco-German war by the German surgeons—is an American invention, the credit of which is due to Dr. Lewis A. Sayre, of New York.

MISCELLANY.

PROF. LONGET'S SEAT IN THE FRENCH ACADEMY OF SCIENCES.—The seat left vacant by the recent death of the eminent physiologist, Prof. Longet, was given by election to M. Lacaze-Duthiers, Professor of Natural History at the Museum.

THE APPLICATION OF MISS JEX BLAKE, recorded in the Miscellany of the last number of *The Medical Times*, has been denied, on legal grounds, by the Senatus of the University of Edinburgh, counsel having been consulted. The ladies are, therefore, not permitted to finish their education.

HONORS AND APPOINTMENTS.—The Société de Secours aux Blessés of France has forwarded the Cross and Diploma of the Society to Sir William Fergusson, Mr. Paget, and Mr. Ernest Hart.

Dr. E. G. Janeway has been appointed one of the Attending Physicians to Bellevue Hospital, New York City, to succeed Dr. T. G. Thomas, who resigned in May last.

Mr. Berkeley Hill, Mr. Christopher Heath, and Mr. Marcus Beck have been appointed teachers of Practical Surgery in University College Hospital.

Dr. Alfred Meadows has been elected Lecturer on Midwifery and Diseases of Women and Children to St. Mary's Hospital Medical School, having recently also been appointed Physician-Accoucheur to the Hospital.

Dr. Cayley has been appointed Physician to the London Fever Hospital.

Dr. John Murray has been appointed Assistant Physician to the Hospital for Sick Children, Great Ormond Street.

At the anniversary meeting of the Vienna Academy of Sciences, Mr. Darwin was elected an Honorary Fellow.

DIAGNOSIS AND PATHOLOGY OF OVARIAN DISEASE.—The eminent ovariologist, Dr. Washington L. Atlee, of this city, is now engaged in the preparation of a work upon this subject. The manuscript will shortly be placed in the hands of the publisher, and the work will be issued as speedily as possible. It is the design of Dr. A. to follow this volume by one on Ovariectomy. The subject-matter of each volume will be garnered from the extended experience of the author, whose case-book contains, in detail, the record of over *nine hundred cases* of abdominal tumors, embracing *two hundred and forty* operations for the removal of diseased ovaria.

The simple record of such a vast experience will in itself be a valuable contribution to surgical science.

THE "CARDIFF GIANT."—The *American Journal of Arts and Sciences* for July has a short account of the hoax of the Cardiff Giant, which is yet humbugging the credulous. It appears that the image was carved from a block of gypsum quarried near Fort Dodge, Iowa. It was transported to Chicago, where the now notorious figure was created at the hands of a well-known marble-worker of that city. It was thence transported by rail to Newhall farm, near Syracuse, N.Y., and buried with great secrecy near the bed of a small stream. After seven months' interment it was "accidentally discovered,"—and we all know of its subsequent wanderings. It was exhibited in this city for a short time in 1869, but attracted little attention.

EXPLORATIONS BY THE COAST SURVEY BUREAU.—Prof. Agassiz, says the *American Naturalist*, has accepted an invitation to take passage in the iron Coast Survey steamer, which has just been built near Wilmington, Del., and which sails

for the Pacific coast in September next. The expedition will take deep-sea soundings all the way. Secretary Boutwell has written to the Secretaries of State and Navy, asking that naval and other officers may be instructed to afford such courtesy and assistance to the exploring party as may be desirable.

Count Courtales, Rev. Dr. Hill, and Dr. W. White, of Philadelphia, will accompany the expedition.

CATTLE-TICK IN THE HUMAN EAR.—A young man, says the *American Naturalist*, late a resident of New Mexico, applied to Dr. Boucher, of Iowa City, suffering from inflammation of the external auditory meatus, which had persisted for four months. Dr. B., after careful examination, successfully removed a live specimen of the cattle-tick (*Ixodes bovis*), which had evidently effected entrance into the canal while the sufferer was sleeping in the open air, as had been his habit while residing in New Mexico.

COBRA POISON.—The rapidity with which the poison of the cobra di capello affects the system is well shown in the instructive experiment of Dr. Fayrer, as detailed by Mr. Sceva in the Proceedings of the Boston Natural History Society, January, 1871. An inguinal fold of the skin of a dog was held by two pairs of long-bladed forceps in such a manner as to include a triangular piece about three inches in length. The cobra fangs were applied to the middle of the free edge, and with a sharp scalpel, held in readiness, the fold of skin was at once cut out, and yet the dog died from the effects of the poison in fifteen minutes. The very short time during which the cobra's fangs were inserted into the tissues was sufficient to allow the poison to be sent through the circulation beyond the reach of the incision!

THE SYME TESTIMONIAL.—Contributors in this city to the Syme Testimonial will be glad to learn (*Lancet*, August 5, 1871) that the handsome sum of £2295 10s. has been collected for the foundation of a memorial of the late Mr. Syme. Of this sum, Mr. Syme's son has contributed £305. The committee of the memorial fund are thus enabled to present a marble bust of Mr. Syme, by Mr. Brodie, to the University of Edinburgh and to the Royal Infirmary, and to hand £2000 to the former institution. By an arrangement with the Association for the better endowment of the University of Edinburgh, this sum has been augmented to £2500, for the foundation of a Syme Surgical Fellowship, tenable for two years, and which will be awarded by the Senatus to a Bachelor of Medicine of not more than three years' standing who shall present the best thesis on a surgical subject,—the first competition to take place in 1874.

JOHN HUNTER.—In the *Times* of October, 1866 (*Brit. Med. Jour.*, July 22, 1871), appeared an interesting account of Old Kensington Church and the historical personages connected with it and the parish. Conspicuous among these was John Hunter, who for nearly thirty years labored diligently on his own freehold at Kensington; here, in fact, he worked out those principles which immortalized him. The house, grounds, dens, etc. at Earl's Court remain but little changed since his day, but the lease of the property is wellnigh expired, and in a short time these interesting acres will be built over, and then will be lost all trace of the home of the sagacious founder of scientific surgery. Under these circumstances, it has been proposed to commemorate John Hunter's long and useful residence in Kensington by placing a window in the magnificent new church, now nearly completed by Gil-

bert Scott, R.A., and thus associate this great benefactor of the human race with Newton, Addison, and others whose memory will be there represented.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

	For the week ending	
	Aug. 12.	Aug. 19.
Abscess	5	0
Asphyxia	2	1
Abdominal Organs (diseases of)	93	84
Brain and Nervous System (diseases of)	54	46
Burns and Scalds	1	2
Cancer	6	2
Casualties	5	5
Circulatory System (diseases of)	7	9
Consumption	42	43
Other Diseases of Respiratory Organs	16	16
Debility	15	17
Diabetes	0	1
Drowned	5	5
Fracture of Skull	1	0
Intemperance	0	4
Marasmus	24	23
Puerperal Convulsions	1	0
Old Age	8	17
Rheumatism	1	0
Stillborn	18	15
Structure of Esophagus	1	0
Scrofula	1	1
Stroke	1	1
Syphilis	0	1
Unknown	2	2
Unclassifiable	10	20
Zymotic Diseases	20	45
Totals	339	360
Adults	123	169
Minors	216	191

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM AUGUST 5, 1871, TO AUGUST 18, 1871, INCLUSIVE.

- MILLS, MADISON, SURGEON.**—By S. O. 165, Headquarters Department of the East, August 4, 1871, granted leave of absence for 30 days.
- CAMPBELL, JOHN, SURGEON.**—By S. O. 309, Headquarters of the Army, A. G. O., August 10, 1871, leave of absence extended 40 days.
- WRIGHT, JOSEPH P., SURGEON.**—By S. O. 172, Headquarters Department of Dakota, July 31, 1871, granted leave of absence for 30 days.
- TOWN, F. L., SURGEON.**—By S. O. 172, Headquarters Department of the East, assigned to duty as Post-Surgeon at Fort Preble, Maine.
- GIBSON, JOSEPH R., ASSISTANT-SURGEON.**—By S. O. 304, A. G. O., August 5, 1871, leave of absence extended 3 months.
- COWLES, EDW., ASSISTANT-SURGEON.**—By S. O. 172, Headquarters Department of the East, authorized to avail himself of leave of absence granted in S. O. 224, A. G. O., current series.
- BUCHANAN, W. F., ASSISTANT-SURGEON.**—By S. O. 167, Headquarters Department of the East, August 7, 1871, directed to comply with orders assigning him to duty at Fort Hamilton, N. Y. H.
- MIDDLETON, P., ASSISTANT-SURGEON.**—By S. O. 171, c. s., Department of the South, upon being relieved by Assistant-Surgeon Pope, to proceed to Lexington, Ky., for duty at that post.
- MCLEDDRY, H., ASSISTANT-SURGEON.**—By S. O. 308, War Department, A. G. O., August 10, 1871, relieved from duty in Department of Texas, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon-General.
- MILLER, G. M. C., ASSISTANT-SURGEON.**—By S. O. 171, Headquarters Department of the South, August 11, 1871, directed to proceed to St. Augustine, Fla., for duty at that Post.
- AZPILL, THOMAS F., ASSISTANT-SURGEON.**—By S. O. 148, Headquarters Department of California, August 3, 1871, assigned to duty as Post-Surgeon at Camp Halleck, Nevada.
- POPE, B. F., ASSISTANT-SURGEON.**—By S. O. 171, Headquarters Department of the South, August 11, 1871, assigned to duty at Elizabethtown, Ky.
- DELANY, A., ASSISTANT-SURGEON.**—By S. O. 92, Headquarters District of New Mexico, July 31, 1871, assigned to temporary duty at Fort Union, N. M.